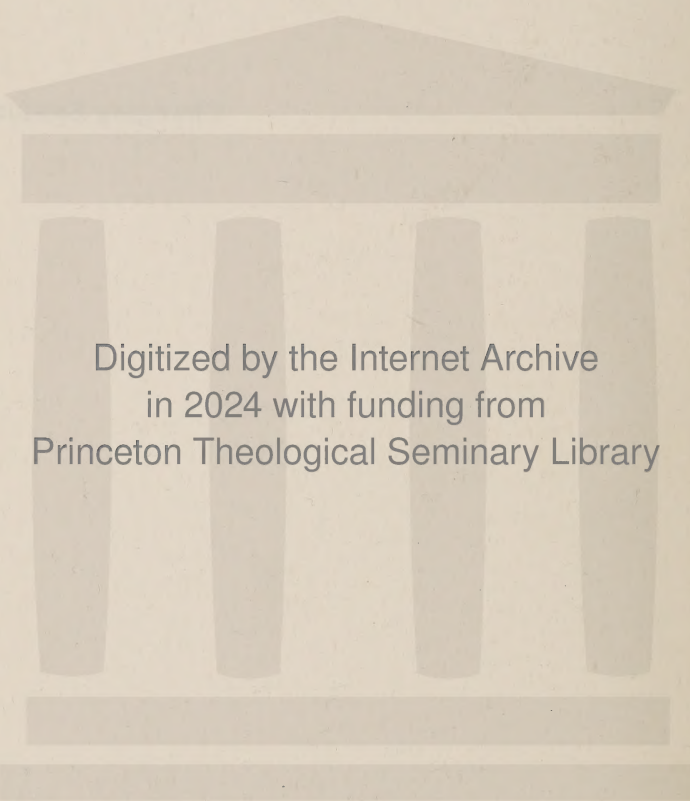


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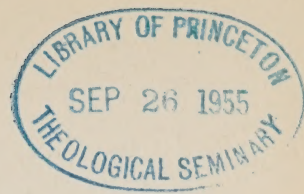
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Charging Systems

CHARGING
SYSTEMS



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CHARGING SYSTEMS

Helen Thornton Geer

American
Library
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Preface

In the past few years librarians have become increasingly interested in the various charging systems currently in use. Questions frequently asked have concerned the types of equipment needed, the methods for handling overdues, reserves, and renewals, and the cost and time required for installing and operating the different systems. This book has been written in an attempt to answer some of these questions and to give as clear and impartial a picture as possible of the charging systems now in use in public, college, and university libraries. Although few of the systems described are currently used in school libraries, the librarians themselves are becoming increasingly aware of the need for more efficient and time-saving procedures. The same is true of special librarians.

The book is designed primarily to be a guide to the selection of a charging system which will best meet the needs of each individual library. The method followed has been to describe simply and clearly under each system the routines involved in charging, discharging, handling renewals and reserves, and sending overdues, and to enumerate the equipment and supplies necessary to the operation of the system. Technical details of the operation of the machines used have been avoided as far as possible, since they can be found in the instruction manuals issued by the individual equipment manufacturers.

This is not a manual for the installation of any system, nor does it recommend a particular system in preference to another. The advantages and disadvantages of each system, enumerated

as objectively as possible, refer to that system alone and to no other unless so specified. However, in order to have a basis for some comparison, it has been assumed that the Newark Charging System used in public libraries or the Double Record Charging System used in college and university libraries is the point of departure when considering a change in charging methods.

Tables showing the comparative features of the 17 systems have been included in the book in order to show at a glance the main advantages and disadvantages of each. The appendices include a listing of some libraries using each system, with the exception of the Newark and Detroit systems, and a partial list of the companies selling equipment and supplies. A selected bibliography, giving references which present an adequate description of the features involved in the operation of each system, is also included.

Obviously, some local systems may have been omitted from the book, but it was possible to include only those which were brought to the attention of the author. At least it can be hoped that the most important methods of charging out books have been described. Cost figures, showing installation expenses, and comparative time studies have been omitted. It is recognized that these would have been helpful, but in order to have figures that would have been applicable to small, medium, and large circulations it would have been necessary to include three sets of figures under each system. Needless to say, this is a study in itself. In addition, cost figures quickly go out of date. A few librarians have made time and cost studies which, since they usually include salary figures, show a truer picture than cost figures derived from manufacturers' catalogs, but too few were available to make a worthwhile comparison between systems or groups of systems. The Bibliography contains references to articles in periodicals which include a few published time and cost studies.

No attempt has been made to list all of the many adaptations or modifications which have been perfected by individual users of the systems. Not only would this have been impossible, so varied are the special routines that have been devised to meet each local situation, but a description of them would have led to confusion in understanding the basic charging procedures. It should also be pointed out that the forms used to illustrate some of the systems are merely suggestive, and in many cases others could have been chosen.

Material for the book was gathered from the printed literature on the subject, by visits to libraries using the systems described, by talking to librarians interested in circulation procedures, and through correspondence with many others, including the sales representatives of the companies manufacturing the equipment. All have been most helpful and cooperative.

Of the many librarians who have aided me in gathering material, I should like to mention particularly the staffs of the libraries which I visited: Birmingham Public Library; Boston University Library; Detroit Public Library; Gary Public Library; Los Angeles Public Library; Minneapolis Public Library; St. Paul Public Library; University of Illinois Library in Urbana and its Undergraduate Division Library in Chicago; University of Minnesota Library; University of Wisconsin Library; and Wayne County Public Library. In addition, I am especially indebted to those librarians who have made available data and information not in published form, particularly Forrest F. Carhart, Jr., Librarian, Air Force Personnel and Training Research Center, Lackland Air Force Base; Louise Stubblefield, Circulation Librarian, Columbia University Library; Horace A. Tollefson, formerly Librarian, Rollins College Library, and now Associate Director, Film Council of America; Mrs. Rella E. Havens, Head, Circulation Department, St. Paul Public Library; Harold Tucker, formerly Librarian, Gary Public Library, and now Librarian, Queens Borough Public Library; Walter H. Kaiser, Librarian, Wayne County Public Library; Felix E. Snider, Librarian, Kent Library, Southeast Missouri State College; and James V. Jones, Assistant Director, St. Louis University Library.

To Helen J. Anderson I owe a debt of gratitude for typing the manuscript in its various forms and for helping in innumerable other ways. Finally, I wish to thank those many librarians in the field who by their encouragement helped me to write and complete this book.

April, 1955

Helen T. Geer

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Introduction

As the concept of the purpose of the library began to change from that of book preservation to use, more liberal rules and simplified procedures for the circulation of materials were developed. The development of new charging systems in public libraries has been rapid during the past one hundred years, whereas college and university libraries have been slower in devising new methods. This may be attributed for the most part to the fact that the circulation records necessary in a public library lend themselves more easily to experimentation and mechanization than do those in a college library.

In public libraries the earliest recorded method of charging books for home use was by writing the author, title, and borrower's name in a day book. A real step forward was made when this daily record was transferred to a ledger to avoid searching through the day book for a single entry. Numbered pages, each one representing a borrower, were used as charge sheets. The charges were receipted by entering the date of return in a separate column.

The shortcomings of this ledger charging system, which was used until the early days of the Civil War, led to many modifications and adaptations. An important one was the dummy system, developed to eliminate the necessity for writing the title each time a book was borrowed and to avoid paging through lists of names and titles to find a specific book. In this method, which was first used in Sunday school libraries, a piece of wood or cardboard about the size of an ordinary book was covered with a

sheet of ruled paper on the back of which was entered the number of the borrower, call number and title of the book, and date of issue. This wooden dummy was filed on the shelf in place of the book that was withdrawn.

The next step was the development of the temporary slip system. A slip was made for each book at the time of withdrawal from the library, giving the call number or author and title, borrower's name and permanent registration number or address, and date of issue. These slips, which could be destroyed or given to the reader as a receipt upon the return of the book, were filed either by date, by borrower's name or number, or by call number. It was only a question of time before this temporary slip became a permanent slip or card for each book. These charging systems were merely substitutes for the dummy system, but had the advantage of keeping the circulation record together in a flexible arrangement at the circulation desk instead of scattering it through the shelves.

As the number of readers using the public library increased it became necessary to devise some method by which each one could be identified. Thus the two card system — one card for the book and one for the borrower — came into existence. Identification cards were used first. When increased use of the library made more records necessary, a borrower's card on which charges for all books withdrawn could be entered was instituted.

Towards the end of the nineteenth century Nina E. Browne, formerly librarian of the Library Bureau in Boston and secretary of the American Library Association Publishing Board, devised a charging system which used pockets or envelopes for each borrower instead of cards. When a book was withdrawn the book card was removed and placed in a pocket which bore the borrower's name, address, and registration number. These borrower's pockets, each containing one book card, were then filed under the date either by call number, author, or title of the book withdrawn. Since only one operation was necessary to make books available for reissue, and since overdues were easily handled, the Browne charging system was a notable advance over the temporary and permanent slip (or card) methods. However, it proved to be cumbersome to operate and gave no permanent record of the loan. It remained for the Newark Charging System, adapted by the Newark, New Jersey, Public Library from several systems in use in libraries during this period, to utilize the borrower's card and book card to the best advantage. Its simplicity and flexibility made it adaptable to both small and large public libraries.

The next striking advance was the development by Ralph A. Ulveling of the Detroit Self-Charging System. For the first time it was thought that librarians could be relieved of performing clerical routines. The accuracy of this belief could be questioned, however, since it was never actually necessary for professionally trained librarians to carry out the clerical procedures except in small libraries where all library routines were performed at one desk. Nevertheless, a new era in librarianship arrived with the introduction of the Detroit system into public libraries, an era characterized by greater emphasis on service to patrons and less emphasis on control over the distribution of library materials. The next step, the replacement of hand labor by machine labor, was taken when mechanical charging systems were developed.

The essential information in any charging system is a record of the book charged, to whom it is charged, and for what length of time. In public libraries, where use is often greater than resources, the prompt return of books loaned and an efficient follow-up procedure are essential. In college and university libraries, on the other hand, a two-way check, by date due as well as by call number, is thought to be necessary. Some librarians feel that a third file by name of student also is essential. These factors automatically rule out certain public library charging methods. Thus double and triple record charging systems — that is, separate files, arranged by date, call number, and name of student — have been used in college and university libraries in order to obtain the information necessary for carrying out the circulation procedures. The disadvantages of the two- and three-card systems, which have been in existence over a long period of time, have led college librarians in recent years to experiment with methods that would combine the two and three records into one, thereby eliminating some routines and speeding up the circulation process. It was not until the 1930's, however, that any report was made in the literature of the profession as to which libraries had been able to do this.¹ Since then various charging systems based on a single-entry method, some of which use machines, have been developed. These have provided a simple and quick means of circulating books to students and faculty. It is interesting to note that, although the introduction of machines into circulation procedures in college and university libraries is of recent origin, they have been used for a longer period in business and statistical work in other depart-

¹Ralph H. Parker, "The Punched Card Method in Circulation Work," *Library Journal*, LXI (December 1, 1936), 903-05.

ments of these same institutions.² Experiments have also been conducted in adapting transaction card charging methods to circulation procedures in college libraries.³ However, college librarians appear to be reluctant to utilize these methods, which make it impossible to know the exact location of a book that is not on the shelf. This factor is important in circulation procedures of college and university libraries.

The history of charging systems indicates clearly that each was an attempt to reduce the number of routine operations of the one in existence at the time. Whether it was the dummy, slip, card, automatic, or single-entry method, all were an improvement upon their predecessors in this respect.

In evaluating any charging system various factors, such as the cost of installation and operation (both in equipment and staff time), improvement in service to readers, and reduction in the number of expensive records, must be considered. Whether a library installs a different charging system than the one already in use depends to a large extent on local conditions and the ultimate saving in time for the staff and in cost to the library. No hard and fast rule exists whereby a librarian may know immediately which system is the most advantageous to install. Rather, he must study his own situation and the results to be expected from the system in terms of cost and efficiency to decide whether or not more up-to-date methods would be beneficial in his library.

² Parker, *loc. cit.*

³ Ralph R. Shaw, "Photographic Charging in Scholarly Libraries," *Catholic Library World*, XXIV (November 1952) 46-47.

Newark Charging System

The majority of public libraries in this country have used the Newark Charging System, which originated about 1900 in the Newark, New Jersey, Public Library during the librarianship of John Cotton Dana. In fact, it generally serves as a point of departure in considering the adoption of any other system. Although modifications have taken place during the fifty years of its use, the basic routines have remained the same.

Equipment used

1. Registration files of all borrowers. These are composed of an alphabetical file of the application blanks of registered borrowers, both adult and juvenile, and a file of numbers assigned to each borrower, usually typed on sheets in a loose-leaf note book.
2. Borrower's cards bearing the name, address, and registration number of each registered borrower. These cards provide space for the entry of date due or date of issue and date returned of each book circulated to a given borrower. Modifications of the Newark Charging System have tended to eliminate this type of borrower's card, using in its place an identification card, usually associated with the Detroit self-charging method.
3. Book cards bearing call number, author, and short title for each non-fiction book to be circulated and author and title for each fiction book.
4. Date slips on which are stamped the date due or date of issue,

to be pasted on the back or front fly leaf of the book. The period of loan can be indicated by different colors of the date slips or book cards and/or by printing "7 days," "14 days," or "28 days" on the date slip and book card.

5. Book pockets giving the call number, author, and short title for each non-fiction book and author and title for each fiction book circulated. Some libraries omit the author and title for non-fiction, giving only the call number.
6. Pencil-dater, date stamp, and ink pad.
7. Date guide cards for filing day's circulation.
8. Fine record slips.
9. Circulation statistical sheets.
10. Overdue postal cards.

Charging routines

1. Book to be taken from the library and the borrower's card are presented by the patron to the assistant at the circulation desk.
2. Date due or date of issue, whichever is used, is stamped on the date slip in the book by the assistant. Special loans, such as 7-day books, 28-day books, and rental books, are so indicated either by a pencil mark or correct date due or date of issue stamp.
3. Borrower's card is stamped with the date due or date of issue for each book taken from the library.
4. Book card is removed from the book pocket and stamped with the date due or date of issue. Borrower's number is placed opposite the date. Book card is put in the charging tray in a designated spot.
5. Borrower's card is inserted in the pocket of the book or returned to the patron. This completes the charging process.
6. At the end of the day the book cards are sorted by fiction and non-fiction. Fiction cards are filed alphabetically by the name of the author and non-fiction cards numerically by the classification number.
7. Book cards for the day's circulation are refilled behind the date due or date of issue guide cards.

Discharging routines

1. When the book is returned to the circulation desk, the date slip is examined to see if it is overdue. If it is, the fine is computed and collected. If the fine is not paid, a slip record is made of the author and title of the book, the name and address of the borrower, and the amount of the fine. This record is placed in a file set aside for the purpose.

2. Date of return is stamped on the borrower's card, thus canceling the charge for the book. Borrower's card is returned to the patron.
3. Book card is located in the circulation file from the date on the date slip, pulled from this file, and placed in the book pocket. The book is ready to be shelved unless it has been reserved. If it has been reserved, it is set aside until a postal card can be sent. During rush hours, books can be piled on the desk or on book trucks until time permits performing the process of slipping.

Renewals

1. If the book is returned to the library, the first charge is canceled in the usual manner and the book is treated as a new charge.
2. If the book is not brought to the library, the following method is used:
 - a. Author, title, and call number of the book, the borrower's card number, and date due or date of issue is given by the borrower to the desk assistant.
 - b. Book card is taken from the circulation file and stamped with the new due date. Letter "R" or abbreviation "Ren" is added in pencil after the date.
 - c. Book card is filed under the original date, in current day's date, or in a special renewal file.

Overdues

1. For each book which falls overdue, the number appearing on the book card is checked with the numerical registration file to ascertain the name and address of the reader who borrowed the book.
2. Overdue postal card is written from this information and sent to the borrower.

Reserves

1. Circulation file, composed of the book cards, arranged by the classification number under date due or date of issue, is searched for each book to be reserved.
2. Clip or signal tab is placed on the card of the book to be reserved. Each copy of the book should be tabbed in this manner. Reserve card or postal card is filed in a designated spot until the book is returned, when a postal card is sent to the patron.

Circulation statistics

Amount of daily circulation is recorded on statistical sheets

by the number of fiction books circulated and, for non-fiction, by the number of books circulated in each classification number.

Advantages

1. There is a permanent record of the number and type of books circulated and the kind of books selected by each borrower.
2. It is possible to know at all times where a given book is, to whom it is charged, and when it is due. The date slip and record on the borrower's card gives this information to the library patron and the book card to the librarian.
3. Different loan periods — 7 days, 14 days, or 28 days — can be administered easily, since the loan period is indicated on each book card.
4. All copies of a book to be reserved can be located at all times.
5. Several assistants can carry on the routines at the same time.
6. Borrower's card may be used in any branch of a large library system provided there is a central registration file at the main library where an alphabetically arranged duplicate of all branch registrations is available. Under the Newark system as it was first organized a central registration file was not included in the routine. It was only later, when modifications were established, that this procedure was used.
7. Weeding and inventory procedures are simply executed, since the book card indicates the number of times the volume has been circulated and is available even when the book is not in the library.

Disadvantages

1. Routines are slow, time consuming, and cumbersome. The borrower's card number is written on each book card by the desk assistant when a book is charged out. Numerical sorting, filing, and counting of loan records, the typing of book cards, and the slipping of books are necessary. Three cards are stamped at the time the book is withdrawn: date card or slip, book card, and borrower's card. There are at least 28 places in the circulation tray to look for a given book: each day's circulation (an average of 26 places) and overdue and renewal files. In addition, most libraries keep what is known as a snag file of book cards that are not considered as overdues or renewals, but are for books not located in the circulation files and not on the shelves.

2. Inaccuracies are apt to occur, especially when transcribing borrowers' card numbers. This is particularly true during the rush hours when the waiting line is long and the desk assistant feels hurried.
3. Circulation desk is apt to be disorderly during rush hours as a result of many unslipped books.
4. Two registration files are necessary: one an alphabetical file of borrowers' names and addresses and the other a file of registration numbers assigned to each borrower.
5. Book cards and pockets and date due slips are necessary, making a total of three required pieces for each book.
6. Date due slips pasted in books give them a messy appearance.

The true Newark method of charging books, as it was used in the early days of the system, is time consuming and cumbersome in operation. As the years passed, modifications, based somewhat on routines associated with the Detroit Self-Charging System, were incorporated into the Newark system.

Detroit Self-Charging System

The Newark system remained in use in the majority of public libraries for many years before any change took place in book charging methods. In 1929 Ralph A. Ulveling at the Detroit Public Library developed what has become known as the Detroit Self-Charging System. Said to be one of the greatest forward movements in library practice in 25 years, the system is based on the active cooperation of the library patron, a principle borrowed from bank procedures. Similar to the Newark system in many of its routines, the Detroit Self-Charging System differs mainly in the use of pre-dated cards inserted in the pocket of the book rather than a date due slip pasted in the book, and of an identification card instead of a borrower's card.

Equipment used

1. Registration files of all borrowers, both adult and juvenile (alphabetical and numerical files) such as are used with the Newark system.
2. Borrower's identification cards. These cards are small and allow space for the borrower's name, address, and registration number. The same type of borrower's card as is used in the Newark system may be substituted.
3. Book cards giving call number, author, and short title for each non-fiction book to be circulated and author and title for each fiction book.
4. Date due cards with a heavy black horizontal line through the middle of each side of the card, thus making four usable

spaces. Date due cards of different colors can be used to indicate the length of the loan — 7 days, 14 days, or 28 days. Date slips may be used as an alternative to cards, but this is not usual with the Detroit system.

5. Book pockets giving the call number, author, and short title for each non-fiction book and author and title for each fiction book circulated. Some libraries omit the author and title for non-fiction, giving only the call number.
6. Pencil dater and ink pad.
7. Date guide cards for filing day's circulation.
8. Fine record slips.
9. Circulation statistical sheets.
10. Overdue postal cards.
11. Pencils for borrowers' use. These can be attached to the tables and desks by chains.

Charging routines

1. Borrower's identification card number is written by the library patron on the first vacant line of the book card.
2. Book is presented with the identification card to the assistant at the circulation desk.
3. Charge is verified by the assistant who keeps the book card and puts a previously dated date due card in the book pocket. If a borrower's card rather than an identification card is used, it is stamped at this point.
4. Identification or borrower's card is returned to the patron or put into the pocket of the book. This completes the charging process.
5. Book card is placed in the day's circulation, fiction to be filed by the author's name, non-fiction by classification number.

Discharging routines

1. When a book is returned to the circulation desk, it is checked to see if it is overdue. If it is, the fine is computed and collected. If the fine is not paid, a slip record is made of the author and title of the book, the name and address of the borrower, and the amount of the fine. This record is placed in a file set aside for the purpose. If the identification or borrower's card is left in the pocket of the book, it is returned to the reader. It is not necessary for this card to be presented when books are returned.
2. Book card is located in the circulation file from the date on the date card, pulled from this file, and placed in the pocket of the book. During rush hours, books can be piled on the

desk or on book trucks until time permits performing the slipping process.

3. Date card is removed and retained for future use. The book is ready to be shelved unless it has been reserved. If it has been reserved, it is set aside until a reserve postal card can be sent.

Renewals, overdues, reserves, and circulation statistics

Routines for these four procedures are the same as those described under the Newark system.

Special routines devised by libraries

1. Borrower's number is written by the library patron at the reading tables rather than at the main charging desk in order to avoid congestion.
2. Numbers on the book cards should be read by the desk assistant *before* the identification card is checked. If there is no question about the legibility of the number at that time, it is unlikely that it will be questioned later.
3. A card showing the proper due date placed in front of the pack of cards for books circulated that day will avoid confusion if the pack should be placed carelessly behind the wrong date tab.
4. Book cards need not be stamped at the time of issue, but placed behind the proper guides in the circulation file tray and dated only when the books become overdue.
5. Date due should be penciled immediately on all cards taken from the file for any purpose.
6. Charge of five or ten cents may be made when date card is not in the returned book.
7. A band dater rather than a pencil dater may be used for predating date due cards and overdue book cards.
8. Book cards for special loans, such as rental books or 7-day books can be filed separately in the circulation tray.
9. Verification of numbers can be made at a separate desk to avoid congestion at the main desk during rush hours.
10. Small sign, giving brief directions can be placed on the circulation desk.

Advantages

1. Time saved for both the assistant and the library patron. There is no writing of card numbers nor stamping of date due by the desk assistant on the borrower's card. A book card can be used for a longer period since only one entry (the borrower's number) is written on it. Date due cards can be dated during quiet periods. Several assistants can

be assigned to the circulation desk to carry on the routines. However, fewer assistants are actually needed, because the charging process has been speeded up. Long lines of patrons during the busy hours are not necessary.

2. Accurate information is given for the most part since there is less danger of transposing numbers which are checked by both the patron and the assistant. Figures made by a borrower usually are as legible and as carefully made as those recorded by the assistant working under pressure.
3. Borrower's identification card not needed for the return of the book.
4. Books are neater and more attractive looking without pasted-in date slips, as are used in the Newark system.
5. Arguments as to whether or not a borrower has charged out a given book are avoided. The charge in his own handwriting can be shown as proof of the transaction.
6. Different loan periods — 7 days, 14 days, or 28 days — can be administered easily, since the loan period is indicated on each book card.
7. It is possible to know at all times where a given book is, to whom it is charged, and when it is due. The date slip and record on the borrower's card gives this information to the library patron and the book card to the librarian.
8. There is a permanent record of the number and type of books circulated and the kind of books selected by each borrower.
9. All copies of a book to be reserved can be located at all times.
10. Weeding and inventory procedures are simply executed, since the book card, which is available at all times, includes the necessary information for the carrying out of these routines.
11. Borrower's identification card may be used in any branch of a large library system. This necessitates a central registration file at the main library where a duplicate of all branch registrations (alphabetical file) is available.

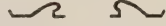
Disadvantages

1. Operation of the reserve system is cumbersome and time consuming, since there are at least 28 places to look for a given book in the circulation tray: each day's circulation (averaging 26 places) and overdue and renewal files. In addition, most libraries keep what is known as a snag file of book cards that are not considered as overdues or renewals, but are for books not located in the circulation

files and not on the shelves.

2. Library patron performs part of the charging process. This is not considered as a disadvantage by many librarians, but it is a factor which should be taken into consideration when the Detroit Self-Charging System is being studied.
3. Error on the part of the library patron in copying his card number can occur. However, since this number should be checked by the desk assistant, the margin of error is slight.
4. Some routines are time consuming, such as the slipping process. Manual sorting, filing, and counting of loan records, and the typing of book cards are necessary.
5. Two registration files necessary: one an alphabetical file of borrower's names and addresses and the other a file of registration numbers assigned to each borrower.
6. Circulation desk is apt to be disorderly during rush hours as a result of many unslipped books.
7. Book cards, book pockets, and date cards are necessary, making a total of three required pieces for each book.

The Detroit Self-Charging System was a great advance over the Newark system and was developed during the period when librarianship was being recognized as a profession by a greater number of people than formerly. For the first time it was thought that the main purpose of training librarians should be to make them better able to assist readers in using the library rather than to teach them only how to perform the various clerical routines. In other words, the possibility of separating the clerical and professional duties of library work was beginning to be seen by many librarians. Although the Detroit Self-Charging System is somewhat cumbersome and time consuming in its routines, it is recognized by many of its users as a quick method for conducting circulation procedures.



Visible Record Charging System

The Visible Record Charging System, sometimes called "signature charging," grew out of the visible registration file, a method for ascertaining at a glance the names of all registered borrowers. It was a logical step to use this file for checking the identification of library patrons, thus eliminating the borrower's card. A visible panel on which to place the registration cards was developed by both Demco Library Supplies and the Library Bureau Division of Remington Rand. Procedures for the Demco Visible Record Charging System and the Remington Rand Index Visible System are essentially the same, the only actual difference being found in the types of equipment used. Even this difference is slight, as will be noted in the following list.

Equipment used

1. Visible registration forms. Demco sells a $4\frac{3}{4}'' \times 2\frac{1}{8}''$ card. Remington Rand's IVI registration cards are slightly smaller, $4'' \times 2\frac{1}{8}''$. Colored cards to identify adult and juvenile borrowers are available.
2. Panels to hold the registration cards. Demco's panel (Figure 1) is of laminated plastic, $14\frac{3}{4}''$ wide by $9\frac{5}{8}''$ high, with a capacity for 117 cards. The Flexo panels sold by Remington Rand come in two sizes: either $14\frac{3}{4}''$ wide by $10\frac{1}{2}''$ high with a capacity for 93 cards or $9\frac{7}{8}''$ wide by $10\frac{1}{16}''$ high with a capacity for 62 cards.
3. Tray for holding panels. Both companies sell two sizes: Demco's small steel tray holds 26 panels or 3042 names

624	Anderson, Arthur	215 S. Main St.	1212
724	Anderson, Norman A.	2715 Gregory St.	1296
727	Anderson, Earle W.	1515 S. Dayton St.	678
737	Anderson, Ray E.	525 S. Brooks St.	381
728	Anderson, Mrs. Anita	617 State St.	333
1101	Anderson, Richard	2521 Monroe St.	353
777	Anderson, William	313 W. Charter St.	772
802	Angel, Walter	2310 W. Lawn Ave.	166
1626	Angell, William	111 Williamson St.	303
1645	Annen, George H.	927 Emerald St.	308
506	Annen, Peter J.	2917 Fairview Ave.	1630
927	Annen, Teraci E.	103 Sherman Ave.	83
936	Anschuetz, William J.	334 Spring Trail	1120
951	Antoon, Albert	2124 S. Oakridge Ave.	1554
879	Antoon, Arthur A.	10 S. Orchard St.	1212
981	Antoon, Armond	25 S. Finckley St.	1100
1107	Antiel, G. J.	225 Vilas Ave.	293
267	Antoinette, Earl V.	105 Russell St.	1084
1636	Antolec, Mrs. Albert	A-121 Proudfit Ave.	776
636	Anton, Mrs. Jule	535 W. Washington St.	1559
375	Antonia, Lester W.	302 S. Bassett St.	1168
639	Auple, Charles E.	713 Oneida Place	937
1014	Armstrong, E. F.	251 Hill St.	1557
1104	Armstrong, William	302 S. Orchard St.	722
1206	Archer, G. E.	2321 Sherman Ave.	694
1234	Arnell, Grace	2206 Kendall Ave.	1010
1201	Arnsperg, Walter	3817 Busse St.	1335
1365	Argue, Lincoln B.	2106 Town Ave.	134
319	Arians, Carl	2517 University Ave.	143
222	Arians, Raymond E.	1323 Snaith St.	1022
1305	Arkins, Donald B.	333 W. Gilman St.	1611
1905	Armbricht, Fred G.	3175 Ridgeway Ave.	1076
1473	Armbricht, John G.	2528 Waunona Way	6761
1301	Armfield, Harold	122 W. Washington	580
402	Armfield, Harold	2640 Mason St.	6374
606	Armstrong, William	636 Crandall St.	1260

Figure 1. Laminated plastic panel used with Visible Record Charging System, showing how the visible registration cards are fastened to the panel. These panels are filed behind each other in the recessed circulation tray. The panel shown is the one used in the Demco method. Remington Rand sells similar equipment.

and its large tray 67 panels or 7500 names. Seventy panels for 4340 names can be included in Remington Rand's small insert tray and 70 panels wide enough to hold 6510 names in its large tray. Trays can be either placed on the top of the circulation desk or recessed in it. Remington Rand's Flexo panels can also be placed on a rotary desk stand.

4. Guide with a tab to indicate the names filed behind it is used with Demco equipment. This is placed in the front of

each panel and operates as a separator. A roller bearing spacer anchors it to the tray.

5. Date cards. Colored cards can be used to indicate different loan periods.
6. Book pockets giving the call number, author, and short title for each non-fiction book and author and title for each fiction book circulated. Some libraries omit the author and title for non-fiction, giving only the call number.
7. Book cards giving call number, author, and title of each book to be circulated.
8. Slips or guides to indicate fines and expiration of borrower's cards. It has been customary to use green and pink with the Demco method and blue and white with Remington Rand equipment.
9. Band dater and ink pad.
10. Date guide cards for filing day's circulation.
11. Circulation statistical sheets.
12. Overdue postal cards.

Charging routines

1. When the book is brought to the circulation desk, the name of the borrower is obtained by the desk assistant.
2. With the Demco system, the borrower's identification number is taken from the visible file and marked on the book card by the desk assistant. Book card then is put with the day's circulation. In the Remington Rand method, the book card is signed by the borrower and is checked against the visible file by the desk assistant. If the name is correct, the book card is placed with the day's circulation.
3. Date card (same color as the book card) is placed in the book pocket. This completes the charging process.
4. Book cards are sorted at the end of the day by fiction and by non-fiction. The former are then filed by author and title and the latter by classification number. They are then placed behind the proper date guide.
5. Book cards are dated when the books become due.

Discharging routines

1. When a book is returned to the circulation desk, the date slip is examined to see if it is overdue. If it is, the fine is computed and collected. If the fine is not paid, a slip giving the amount of the fine and the author and title of the book is made out and placed with the borrower's record.
2. Book card is withdrawn from the charge file and placed in the pocket of the book. The book is ready to be shelved un-

less it has been reserved, in which case it is set aside until a reserve postal card can be sent.

Renewals, reserves, and circulation statistics

Renewals, reserve records, and circulation statistics are treated in the same manner as under the Newark Charging System.

Overdues

The information necessary for sending overdue notices is found by consulting the visible record file. Under the Demco system, green fine slips, recording the necessary information about the overdue book, are placed in the front of the borrower's registration card in the visible file in such a way as to hide the registration number. Blue guides are used in the Remington Rand method for the same purpose.

Advantages

1. Simplified routines. The system is easy to operate because no machines are required and cards that can be snapped on the visible panel are the only necessary supplies other than the usual book and date cards and book pockets.
2. Installation and operation inexpensive.
3. Elimination of the borrower's card, numerical registration files, and date due slips pasted in the books means that time is saved. A visible form card is used instead of the application card, an interchangeable predated date due card for the date due slips, and a borrower's card is not necessary.
4. The borrower's interests and hobbies can be coded by tabbing the cards in the visible file.
5. Overdues are kept at a minimum, since fines which are indicated on the visible registration card are easily detected.
6. Registration file is always up to date because expired cards can be seen easily and lost or misfiled cards are no longer possible.
7. Good public relations are maintained in small community libraries because the librarian is not encumbered by numerous routines and therefore is free to give assistance to each reader.
8. Time saved for both the assistant and the library patron. There is no stamping of date due on a borrower's card. Date due cards can be dated during quiet periods.
9. Savings in supplies. The borrower's card and numerical

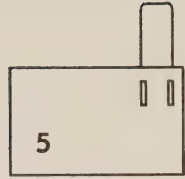
registration files have been eliminated. Date due cards can be used many times, and more charges can be entered on book cards when only one notation (borrower's number or name) is made.

10. There is a permanent record of the number and type of books circulated and the kind of books selected by each borrower.
11. It is possible to know at all times where a given book is, to whom it is charged, and when it is due. The date due card gives this information to the library patron and the book card to the librarian.
12. Different loan periods — 7 days, 14 days, or 28 days — can be administered easily, since the loan period is indicated on each book card.
13. All copies of a book to be reserved can be located at all times.
14. Weeding and inventory procedures are simply executed, since the book card indicates the number of times the volume has been circulated and is available even when the book is not in the library.

Disadvantages

1. Reregistration of patrons necessary in order to use the visible registration cards.
2. Circulation desk can become congested if several assistants are needed at one time.
3. Transposition of borrower's registration number possible under the Demco method since the desk assistant must take it from the visible file and write it on the book card.
4. Operation of reserve system cumbersome and time consuming, since there are at least 28 places to look for a given book in the circulation tray: each day's circulation (averaging 26 places) and overdue and renewal files. In addition, most libraries keep what is known as a snag file of book cards that are not considered as overdues or renewals, but are for books not located in the circulation or on the shelves.
5. Some routines, such as the slipping process, are time consuming. Manual sorting, filing, and counting of loan records, and the typing of book cards are necessary.
6. Circulation desk is apt to be disorderly during rush hours as a result of many unslipped books.
7. Book cards, book pockets, and date due cards are necessary, a total of three required pieces for each book.

Obviously, the Visible Record Charging System is appropriate only in small communities, where the circulation is not large. It is suggested for libraries in cities of not more than 25,000 or 30,000 population or for branch libraries serving only this number of people.



Dickman Book Charger System

As early as 1900 librarians were beginning to explore the possibility of using a machine for the process of charging out books to patrons. At that time Edwin White Gaillard of the New York Public Library constructed a machine at a cost of \$3500, but it proved to be unsuitable for the purpose. Nothing further was accomplished until the late 1920's when George F. Bowerman, librarian of the Public Library of the District of Columbia, requested the help of the U. S. Bureau of Efficiency in finding a machine which would be simple in construction and operation but at the same time low enough in cost to be of use to a small as well as a large public library. Many models, ranging in price from \$450 to \$3500, were submitted by various companies, but it was not until 1927 that the Dickman Book Charger, manufactured by the Library Efficiency Corporation of New York City, was found to meet all of the specifications, including a reasonable cost of operation. A trial installation was made at the Public Library of the District of Columbia. Many of the larger public library systems became interested in this charging method, including the Toledo Public Library, where in 1929 improved procedures were devised. In 1941 the Library Efficiency Corporation, now a division of Bro-Dart Industries, experimented with an electric model.

Equipment used

1. Dickman Mechanical Book Charger, Model "A" (Figure 2), built to take a standard borrower's card, book card, and

date card. It has two slots, one on the right and the other on the left, into which are inserted the embossed date plate and the borrower's number plate. A charger arm on the machine is pressed down to record the transaction.

2. Registration files, both alphabetical and numerical, of all borrowers entitled to use the library. These include both adult and juvenile users and are the same kind of files used in both the Newark and Detroit systems. In large library systems, where a borrower may use his identification card in any branch, a duplicate registration card is made and sent to the main library to be filed in a central place.
3. Borrower's card or identification card (Figure 3) equipped with a number plate which is attached to the card by means of a hinge.
4. Metal plates with embossed dates for book charger. It is possible to have one for renewed books (marked "renew") and, if the machine is used in college and university libraries, one for overnight books.
5. Date due cards with a heavy black line across the middle of the card. This same card is used in the Detroit Self-Charging System. These cards should be predated in order to allow faster handling of the charging routines.
6. Book cards giving call number, author, and short title of each non-fiction book to be circulated and author and title of each fiction book.
7. Book pockets giving the call number, author, and short title for each non-fiction book and the author and title for each fiction book circulated. Some libraries omit the author and title for non-fiction, giving only the call number.
8. Fine record slips.
9. Date guide cards for filing day's circulation.
10. Circulation statistical sheets.
11. Overdue postal cards.
12. Rubber pad on which to place the machine.
13. Ribbon for machine.

Charging routines

1. Day's date plate is inserted each morning in the machine in the right-hand slot.
2. Book to be withdrawn from the library is presented by the patron to the desk assistant, together with his library card.
3. The book card is taken from the book pocket and placed on the machine.
4. Borrower's number plate, turned on its hinge, is inserted in the machine in the left-hand slot.

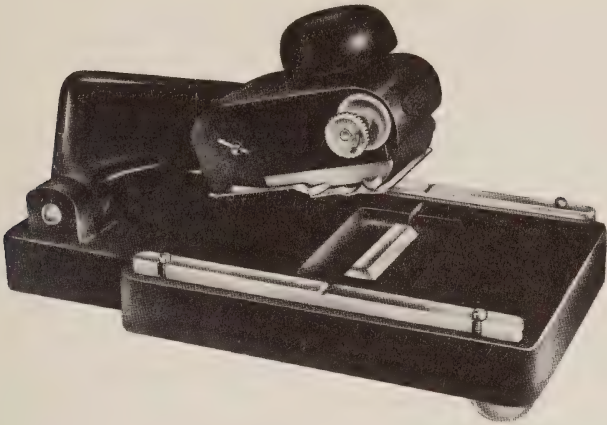


Figure 2. Dickman Mechanical Book Charger, Model "A," showing the charger arm which is pressed down when the transaction is recorded. The date plate is inserted in a slot at the right and the number plate on the borrower's card in the one at the left.

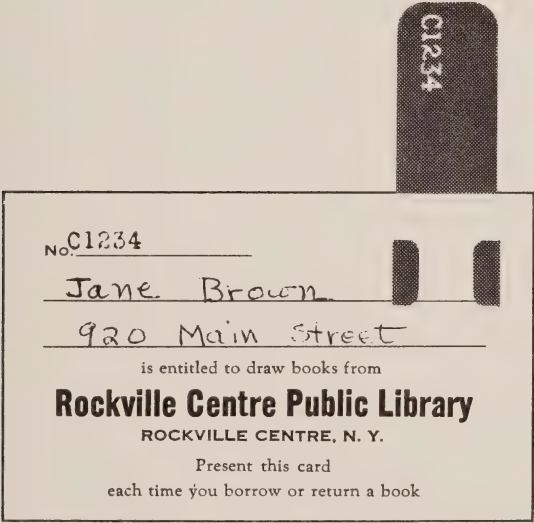


Figure 3. Borrower's card with metal plate attachment, Dickman Book Charger System. When the card is used in the library the plate is pulled out on its hinge, as shown, and inserted in the left-hand slot of the Dickman machine. The library patron will usually carry the card with the plate down for convenience.

5. Charger arm is pushed down so that the borrower's number and the date are printed on the book card.
6. Book card is taken from the machine and placed in the day's circulation.
7. Borrower's number plate is removed from the machine and the borrower's card placed on the machine.
8. Charger arm is pushed down again to print the date on the borrower's card (if borrower's card and not identification card is used).
9. Predated date due card is placed in the book pocket. This completes the charging process.

Discharging routines

1. When a book is returned to the circulation desk, it is checked to see if it is overdue; if it is, the fine is computed and collected. If the fine is not collected, a slip record is made of the author and title of the book, the name and address of the borrower, and the amount of the fine. This record is kept in a file set aside for the purpose.
2. If a borrower's card is used, the open date is canceled by placing the card on the book charger and pressing the charger arm down to print the day's date on the line opposite the open date. Some libraries use a pencil dater for this purpose. Borrower's card is returned to the patron.
3. Book card is located in the circulation file from the date on the date due card. It is pulled from this file and placed in the pocket of the book. If a reserve is clipped to it the book is set aside until a reserve postal card is sent. During rush hours the books can be piled on the circulation desk or on a book truck until time permits performing the slipping process.
4. Date due card is removed from the book and placed in a designated spot in the circulation tray to be used later. The book is ready to be shelved unless it has been reserved.

Renewals

1. If the book is brought to the library, it is treated as a new charge after the first one has been canceled.
2. If the book is not brought to the library, one of two methods can be used:
 - a. The letter "R" or the abbreviation "Ren" is penciled on the book card and the date entered in pencil or by the machine.
 - b. Metal plate with abbreviation "Ren" embossed on it is inserted in the machine. Book card is stamped by printing the day's date and "Ren."

Overdues, reserves, and circulation statistics

Routines for these procedures are the same as were described under the Newark system.

Advantages

1. Accurate and legible records, since they have been made with a machine. This protects the library patron, since the records pertaining to the book charged out to him have been printed and not handwritten.
2. Simple and businesslike method for charging out books for circulation.
3. Charging procedures as used in the Detroit and Newark systems need not be changed, since only the method for carrying them out is different. Book cards, date due cards, and borrower's identification cards are used in the same way. The machine does what the desk assistant did under the two older systems.
4. Professional and clerical duties are clearly separated with the result that the public receives better service.
5. Machine is simple to operate.
6. Time is saved for the library and the borrower. There is no writing of card numbers nor stamping of date due on a borrower's card. Date due cards can be dated during quiet periods.
7. Savings in supplies are effected. Date cards can be used many times, and more charges can be entered on each book card with systematic printing.
8. Borrower's card, especially if an identification card is used, is not needed for the return of the book.
9. Eyestrain and mental fatigue are kept at a minimum. It is less tiring to use a machine than to write a number and check or stamp cards.
10. Different loan periods — 7 days, 14 days, or 28 days — can be administered easily, since the loan period is indicated on each book card.
11. It is possible to know at all times where a given book is, to whom it is charged, and when it is due. The date due cards give this information to the library patron and the book card to the librarian.
12. There is a permanent record of the number and type of books circulated and the kind of books selected by each borrower.
13. All copies of a book to be reserved can be located at all times.
14. Weeding and inventory procedures are simple to execute, since the book card, which is available at all times, in-

cludes the information necessary for carrying out these routines.

15. Borrower's card may be used in any branch of a large library system where the Dickman system is operated.
16. Fewer assistants are needed at the circulation desk.
17. The system is adaptable for use in various sizes and types of libraries.

Disadvantages

1. Reregistration of borrowers necessary at time of installation of system in order for each one to obtain a card with a metal number plate.
2. A borrower's card carrying the metal plate is necessary with this system.
3. Machine is mechanically rather than electrically operated, so that it is necessary for the desk assistant to perform the greater part of the charging procedure.
4. Operation of reserve system is cumbersome and time consuming, since there are at least 28 places to look for a given book in the circulation tray: each day's circulation (an average of 26 places) and overdue and renewal files. In addition, most libraries maintain what is known as a snag file of book cards that are not considered as overdues or renewals, but are for books not located in the circulation and not on the shelves.
5. Some routines, such as the slipping process, are time consuming. Manual sorting, filing, and counting of loan records, and the typing of book cards are necessary.
6. Two registration files are necessary: an alphabetical file of borrower's names and addresses and a file of registration numbers assigned to each borrower.
7. Circulation desk is apt to be disorderly during rush hours as a result of many unslipped books.
8. Book cards, book pockets, and date cards are necessary, a total of three required pieces for each book.
9. Noise of the machine can be annoying to library readers.
10. Machine can fail.

The Dickman Book Charger System, developed at a time when librarians were more conscious of the necessity for separating the clerical duties from the professional ones because of increased emphasis on advisory help given to library patrons, was a boon to libraries and opened the way for further achievements in adapting mechanical and electrical machines for library purposes. For the first time, it was felt by librarians and patrons alike that more businesslike methods, particularly

in connection with circulation procedures, had entered the library world. Accurate and more legible records, derived from the use of a machine instead of handwritten entries, protected both the library and the borrower. In addition, no radical changes in customary routines were necessary with the installation of the Dickman Book Charger System.

Gaylord Charging System

Gaylord Brothers was the first company to put on the market an electrically operated book-charging machine. This machine was introduced in 1932. Used by public and college libraries, the Gaylord Charging System retains all of the processes and records of the Newark system, but accomplishes them with a semi-automatic machine.

Equipment used

1. Gaylord Electric-Automatic Book Charging Machine (Figure 4). This machine, which can be used on direct as well as alternating current, is 13" long, 9" wide, and 8 1/2" high. It contains a slot into which the book card is pushed for recording the transaction.
2. Registration files, both an alphabetical file by name and address of borrower and a numerical file to identify the borrower's card number. These include both adult and juvenile borrowers and are the same files as are used in the Newark, Detroit, and Dickman systems. In large library systems, where a borrower may use his identification card in any branch, a duplicate registration card is made and sent to the main library to be filed in a central place.
3. Date plates indicating period of loan — 7 days, 14 days, and 28 days.
4. Borrower's card or identification card equipped with a metal plate embossed with the registration number. This plate fits into the bottom of the card (Figure 5).

5. Book cards bearing call number, author, and short title for each non-fiction book to be circulated and author and title for each fiction book.
6. Book pockets giving the call number, author, and short title for each non-fiction book and author and title for each fiction book circulated. Some libraries omit the author and title for non-fiction, giving only the call number.
7. Date due cards.
8. Date book for filing date plates to be used in the machine.
9. Fine record slips.
10. Guide cards for circulation file (daily).
11. Circulation statistical sheets.
12. Overdue postal cards.
13. Ribbon for machine.
14. Rubber pad on which to place the machine.

Charging routines

1. Machine is set up each morning with the proper date plate inserted in the date bar.
2. Book to be withdrawn from the library is presented to the desk assistant by the patron together with his borrower's card or identification card.
3. Borrower's card or identification card is turned so that the embossed side of the metal plate is in the lower left-hand corner. It is then placed in the card slot of the machine.
4. Book card is removed from the book and a predated date due card is inserted in the pocket of the book.
5. Date knob on the machine is set to the numeral corresponding to the length of the loan period in days.
6. Book card is guided slowly into the card chute until the machine operates. The date due and the borrower's number are printed automatically on the book card. Caution must be exercised when inserting the borrower's card in the machine in order for the numbers to be stamped perfectly on the book card. If it is not placed straight, the numbers will not be clear. In the same way, the last digit can be clipped off a number when it is stamped on a book card that has been turned over for use on the back of the card. Both of these mistakes can be avoided by careful watching when the borrower's card is placed in the machine.
7. Book card is removed immediately. It should not be held in the chute. The machine automatically clips a small corner from the left side of the book and date cards each

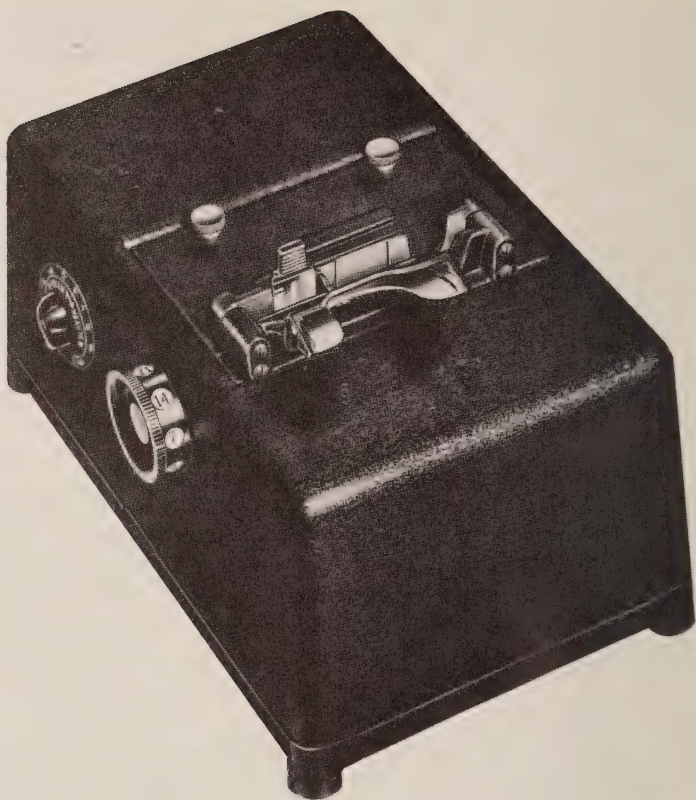


Figure 4. Gaylord Electric-Automatic Book Charging Machine, showing the slot for the borrower's card and the chute into which the book card is pushed for recording the transaction. The knob at the back regulates the heaviness of the impression while the one at the front indicates the length of the loan.

time a charge is made so that the cards can go into the chute a little farther the next time. This makes possible the printing of each charge below the previous one.

8. Borrower's card or identification card is returned to the patron. This completes the charging process.
9. Book card is placed with the day's circulation to be filed later by the classification number.

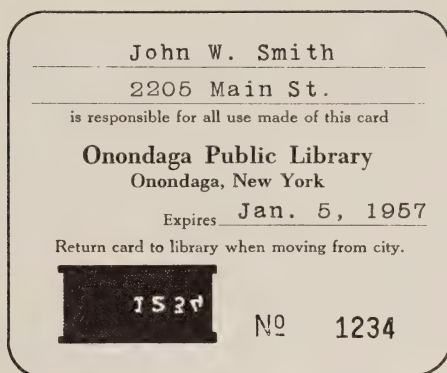


Figure 5. Borrower's identification card with embossed metal plate, Gaylord Charging System.

Discharging routines

1. A book returned to the circulation desk is checked to see if it is overdue. If it is, the fine is computed and collected. If the fine is not paid, a slip giving the name and address of the borrower, the author and title of the book, and the amount due is prepared and placed with the borrower's record.
2. Book card is located in the circulation file from the date on the date card. The book card is pulled from this file and placed in the pocket of the book. If the book is reserved, it is set aside until a reserve postal is sent. During rush hours, the books can be piled on the circulation desk or on a book truck until time permits performing the process of slipping.
3. Date card is removed from the book and placed in a designated spot in the circulation tray to be used later. The book is then ready to be shelved unless it has been reserved.

Renewals

1. If the book is brought to the library it can be treated as a new charge.
2. If the book is not brought to the library the book card is taken from the circulation file. The new date is stamped on the card with the machine and either "R," "Ren," or a ditto mark is penciled on the book card after the date to indicate a renewal.

Overdues

Overdue books are treated in the same manner as under the Newark system. Some libraries post the names and card numbers of delinquent borrowers at the circulation desk in a visible file. This procedure is not unique with this system, since it can be used with any system.

Reserves and circulation statistics

Libraries use the same routines for reserves and statistical records as in the Newark system.

Special routines devised by libraries

1. When more than one book is being withdrawn the borrower's card is left in the slot of the machine instead of being removed after each book card is stamped.
2. Different colored ribbons are used to indicate different years.
3. Plate embossed "Ren" or "Renewed" is used for renewals.

Advantages

1. Accurate and legible records generally are made by this machine.
2. Simple and businesslike method for charging out books for circulation.
3. Charging procedures as used in the Detroit and Newark systems need not be changed since only the method of carrying them out is different. Book cards, date due cards and borrower's identification cards are used in the same way. The machine does what the desk assistant did under the two older systems.
4. Time saved for the library and the borrower. There is no writing of card numbers nor stamping of date due on a borrower's card. Date due cards can be dated during quiet periods.
5. Machine is simple to operate. By means of an electrical impulse, the necessary records are imprinted on the cards with little effort on the part of the assistant.
6. Professional and clerical duties are clearly separated, with the result that the public receives better service.
7. Savings in supplies are effected. Date due cards can be used many times, and more charges can be entered on each book card with systematic printing.
8. The system is adaptable for use in various sizes and types of libraries. Can be combined with Tab Charging Systems, such as scotch tape¹ or metal tabs.²

¹Western Michigan College Library, Kalamazoo.

²Marietta Daniels, "How It Is Done at Washington University," *Library Journal*, LXIV (May 15, 1949), 397-99.

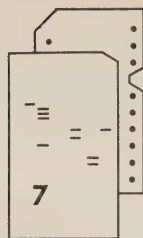
9. Borrower's identification card not needed for the return of a book.
10. Eyestrain and mental fatigue are kept at a minimum. Using a machine is less tiring than writing a number and checking or stamping cards.
11. Fewer assistants are needed at the circulation desk.
12. There is a permanent record of the number and type of books circulated and the kind of books selected by each borrower.
13. It is possible to know at all times where a given book is, to whom it is charged, and when it is due. The date due card gives this information to the library patron and the book card to the librarian.
14. Different loan periods — 7 days, 14 days, or 28 days — can be administered easily, since the loan period is indicated on each book card.
15. All copies of a book to be reserved can be located at all times.
16. Weeding and inventory procedures are simply executed, since the book card, which is available even when the book is not in the library, indicates the number of times the volume has been circulated.
17. Borrower's card can be used in any branch of a large library system where the Gaylord system is in operation. This, of course, necessitates a central registration file including a duplicate alphabetical file of all branch registrations.

Disadvantages

1. Reregistration of all borrowers is necessary in order to provide a new type of card with a metal plate.
2. Borrower's card with metal plate is necessary with this system.
3. Machine can fail. The distance to the repair shop may be great. In addition, experience has shown that a loan machine may not always be available. Therefore some libraries might find it necessary to rent a spare machine.
4. Rental fee of \$50 each year might be prohibitive for some small libraries.
5. It is impossible to ascertain the number of books a borrower has charged to him since no record of this kind can be maintained if an identification card is used. If the regular type of borrower's card is used this information can be stamped on it.
6. Two registration files are necessary: one an alphabetical file of borrowers' names and addresses and the other a file of registration numbers assigned to each borrower.

7. Some routines, such as the slipping process, are time consuming. Manual sorting, filing, and counting of loan records, and the typing of book cards are necessary.

Gaylord Brothers has the distinction of being the first company to devise an electrically operated machine to be used for charging out books. Working on the same principle as the Newark and Detroit systems, this charging method has been used successfully in public and college libraries for over twenty years.



Photographic Charging System

The idea which produced photographic charging originated with Ralph R. Shaw, formerly librarian of the U. S. Department of Agriculture Library in Washington. Long a pioneer in advocating the installation of machines for the improvement and simplification of library routines, not only to cut down labor but also to reduce operational costs, Dr. Shaw, while librarian at the Gary Public Library in 1940, installed a camera¹ which microfilmed circulation records.² Continuing his studies of circulation control methods, he experimented further and perfected a second camera which used photographic paper instead of microfilm for charging procedures. The Library Bureau Division of the Remington Rand Corporation built the first model of this machine, which was unveiled at the American Library Association Conference in San Francisco in 1947.³ Thus was inaugurated one of the most modern and far-reaching charging systems to date, the first of the so-called transaction card methods, one on which many subsequent systems have been based.

Three machines — the Remington Rand Photocharger, the Recordak Junior Microfilmer, and most recently the Diebold Portable Microfilm Camera — are now on the market to be used

¹ The Recordak Junior Microfilmer, manufactured by the Recordak Corporation, a subsidiary of the Eastman Kodak Company.

² Ralph R. Shaw, "Reducing the Cost of the Lending Process," *ALA Bulletin*, XXXV (October 1, 1941), 504-10.

³ "Shaw Photocharger Announced," *Library Journal*, LXXII (November 1, 1947), 1512-15.

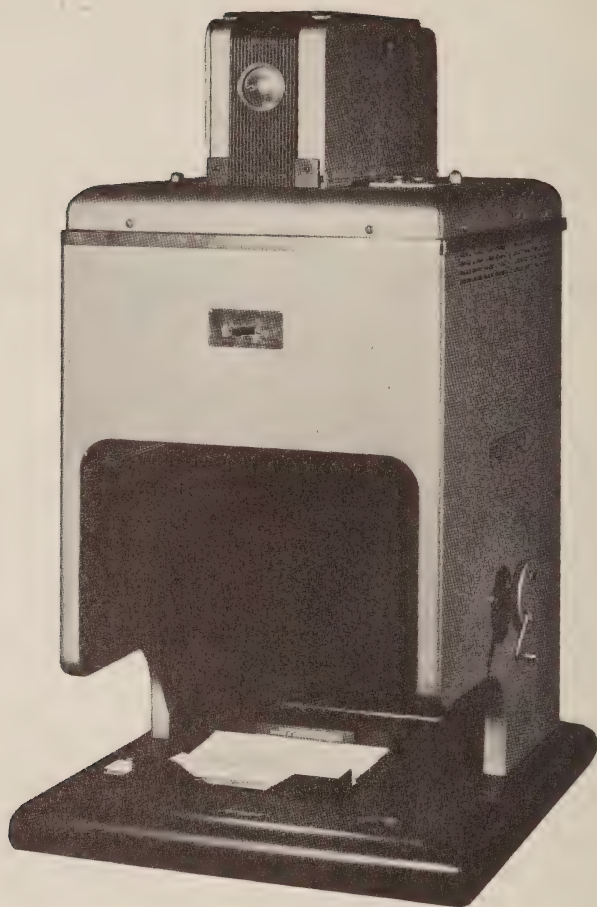


Figure 6. Recordak Junior Microfilmer, showing the space on which is placed the borrower's identification card, book card, and transaction card. The buttons on the front are switches which operate the machine. The film is placed in the compartment at the top. The winder at the right is used when the microfilm is read on the machine.

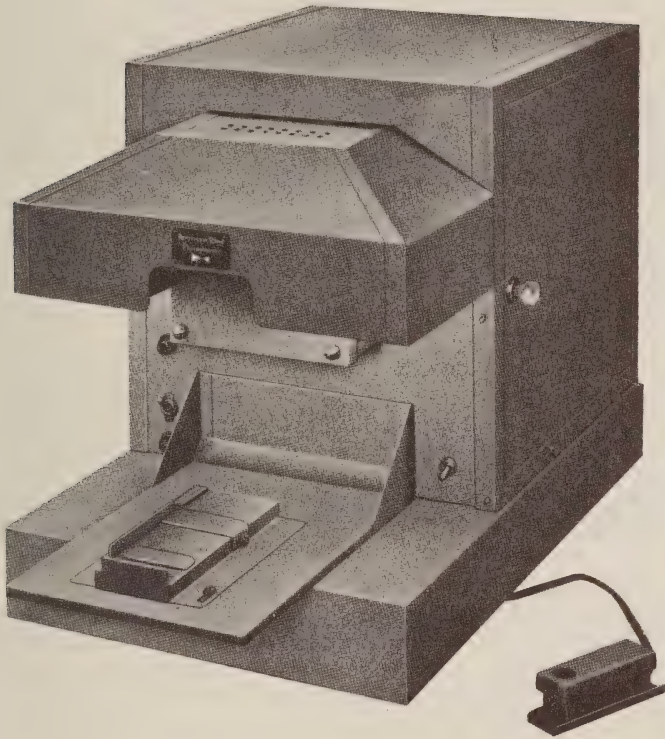


Figure 7. Remington Rand Photocharger, showing the surface on which the borrower's identification card, book card, and transaction card are placed to be photographed. Either a hand switch or a foot switch can be used for recording the transaction. The foot switch is put on the floor near the machine. On the left side of the machine is a dial which indicates the amount of photographic film left on the spool.

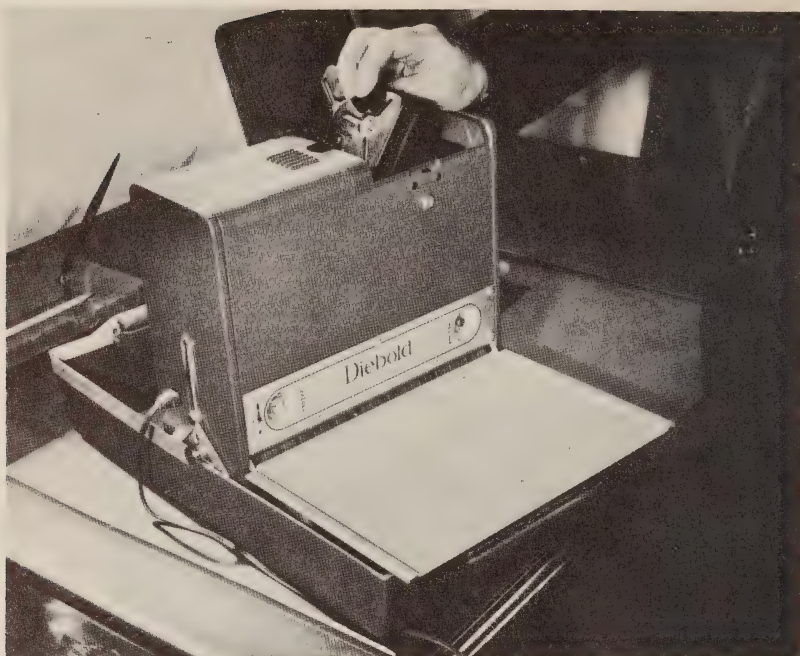


Figure 8. Diebold Portable Microfilm Camera, showing the surface on which the borrower's identification card, book card, and transaction card are placed to be passed through the space where they are photographed to the collector tray in the back. The magazine containing the film spool is placed in a compartment on the top of the machine as shown in the photograph.

in the photographic process of book charging. They operate on the same basic principles and differ only in the technical details involved in the charging routines and in the method for reading the photographic records. The Remington Rand Photocharger provides for strip prints on sensitized paper, which look like photostat copies and can be read without further enlargement. The Recordak and Diebold, on the other hand, record on microfilm, and require a projector for reading the positive film.⁴ Four basic principles govern the use of these three machines:

1. Three items are photographed simultaneously: book information, either from a book card or from typed information

⁴Remington Rand now has on the market a Film-A-Record machine which also records on microfilm, but it is not known to be used in circulation procedures in any library.

on an accurately placed book pocket possible only with the Remington Rand machine; serially numbered transaction card, bearing the date due; and borrower's card or some other means of identification.

2. The record is kept on strips of film or photographic prints as long as necessary.
3. Serially numbered transaction cards are removed from the books as they are returned and kept in a numerical file until needed.
4. Any number missing from a series in a certain block of numbers of transaction cards indicates that the book in which that transaction card has been placed is on loan. A reading of the film or print gives the name and address of the borrower who has this book.

Essential equipment

1. Recordak Junior Microfilmer, a large machine which can sit on the circulation desk (Figure 6). *Or:*
2. Remington Rand Photocharger, a machine about 1 1/2' wide, 24" high, and 2' from front to back (Figure 7). *Or:*
3. Diebold Portable Microfilm Camera, a small, compact machine weighing twenty pounds (Figure 8). In use it opens out and stands about 9 1/8" above the charging desk.
4. 16mm film. The 200-foot rolls used in the Recordak machine are usually cut off at 100 feet, the capacity of the take-off spool. The Diebold machine uses 50-foot magazines; the Remington Rand Photocharger uses 250-foot rolls of photographic paper.
5. Prenumbered and predated transaction cards. These serve as date due cards which are inserted in the pocket of a book when it is circulated. These can be either (1) punched cards serially numbered — McBee (Figure 9), IBM (Figure 10), Hadley Unisort, or Remington Rand punched cards; (2) 3" by 5" cards serially numbered with an automatic numbering machine; or (3) slips cut to a certain size and serially numbered. It is highly recommended that some sort of punched card rather than the other alternatives listed be used in photographic charging in order to maintain the greatest efficiency. This holds true of any transaction card charging system.
6. Registration file of all borrowers. This consists of an alphabetical file of the application blanks of registered borrowers, both adult and juvenile.
7. Borrower's identification card.
8. Book cards bearing call number, author, and short title for

DO NOT REMOVE CARD FROM THIS POCKET
A FINE OF 10¢ WILL BE CHARGED IF LOST

F 6021

Dec. 13 '52
Aug. 17 '53
Mar. 25 '54
NOV 12 '54

PUBLIC LIBRARY

THIS BOOK IS DUE ON THE
LATEST DAY STAMPED

VANCOUVER, B.C.

DO NOT REMOVE CARD FROM THIS POCKET
A FINE OF 10¢ WILL BE CHARGED IF LOST

LIBRARY BOOK CONTROL NUMBER

THOUSANDS
HUNDREDS
TENS
UNITS

LIBRARY BOOK CONTROL NUMBER

THOUSANDS
HUNDREDS
TENS
UNITS

BRANCH NO

DAYS LOANED

HUND THOUS
TENS THOUS

Figure 9. McBee Keysort Transaction Card, Photographic Charging System. The punches along the left-hand side of the card indicate the date due and the transaction card number, those on the right the period of loan (in this case 14 days).

- each non-fiction book to be circulated and author and title for each fiction book.
9. Book pockets giving the call number, author, and short title for each non-fiction book and author and title for each fiction book circulated.
 10. Envelopes for mailing microfilm to the nearest laboratory for the Recordak and Diebold methods; or an automatic processor or similar equipment for processing the photographic print from the Remington Rand machine.
 11. Spare fuses and bulbs for the machine.
 12. Microfilm reader for use with the Diebold machine, which does not have a reader attached to the machine as does the Recordak.

DATE DUE		DATE DUE	
JUN 22		JUN 22	
LIB. NO. 68		LIB. NO. 68	
TR. NO. 0001		TR. NO. 0001	
LIBRARY		LIBRARY	
LOS ANGELES PUBLIC LIBRARY		LOS ANGELES PUBLIC LIBRARY	
A CHARGE WILL BE MADE IF THIS CARD IS NOT WITH THE BOOK WHEN RETURNED.		A CHARGE WILL BE MADE IF THIS CARD IS NOT WITH THE BOOK WHEN RETURNED.	

Figure 10. IBM Transaction Card, Photographic Charging System. This card, as used in the Los Angeles Public Library, is punched to indicate date due and the transaction number. It is placed in the IBM Time Stamping Machine to record the date, branch symbol or number, and the transaction card number. IBM tabulating equipment is used to sort and punch these cards. The card can be used twice.

13. Fine record slips.
14. Sheets for recording whatever statistics are kept. Since it is not possible to break circulation statistics down by classification number, libraries record only a daily total.
15. Overdue notices, which can be either postal cards or slips to be inserted in window envelopes.

Optional equipment¹

1. Three-inch high divided shelf for date due cards, divided for 7-day, 14-day or 28-day books, called a "take-off box."
2. Visible record for handling reserves. Among the types that have been used by libraries are: Victor Book Visible

Recorder (Catalog No. 583F); Remington Rand IVI Desk Stand (adapted for this purpose); Wheelindex Cub Rotary Index File; Linedex Visible File.

3. Film rewind device on which can be placed the photographic print from which the overdue information is taken.
4. Template (hand feeder) to be used with Diebold equipment in pushing cards through the machine.
5. Box for storing returned date due transaction cards, needed especially for handling large circulations. Some libraries have used pull-card files manufactured by the McBee Key-sort Company.⁵ These are aluminum trays holding 24,000 cards each, approximately 3 1/2' x 2 1/4' x 30" in size, which are placed on a light tubular steel frame on rubber casters.
6. Second microfilm reader for libraries where the reader is attached to the Recordak charging machine and would not be available for checking overdues.
7. Signaling device for indicating reserves on book cards. Flag-it stickers, metal or plastic signal clips, and paper clips have been used by libraries for this purpose.
8. Alignment block for sorting McBee cards.

Charging routines

Recordak

1. When the borrower presents book to be withdrawn from the library and his identification card to the desk assistant, the machine switch is turned on.
2. Borrower's identification card is placed inside the bar at the left.
3. Book card is removed from the book pocket and placed beside the borrower's identification card.
4. Prenumbered and predated transaction card⁶ is placed beside the book card.
5. Exposure button is pressed, thus completing the filming of the transaction.
6. Book card, borrower's identification card, and transaction card are picked up from the machine and placed in the pocket of the book. This completes the charging process.
7. Machine switch is turned off.
8. When the spool of film containing the charges is full, it is sent to the nearest laboratory for developing.

⁵Queens Borough Public Library, Jamaica, N. Y., is one library using this equipment.

⁶As noted above, transaction cards are date due cards.

9. Microfilm record is filed when it is returned from the laboratory.

Remington Rand

1. When the borrower presents the book to be withdrawn from the library and his identification card to the desk assistant, the machine switch is turned on.
2. Book card is taken from the book pocket and placed on the designated spot on the machine.
3. Prenumbered and predated transaction card is placed on top of the book card, but below the book card information.
4. Borrower's identification card is placed on top of the date due card, leaving the author, title, and serial number exposed.
5. Treadle or hand switch of the machine is pressed, thus completing the photographing of the transaction.
6. Book card, borrower's identification card, and transaction card are picked up from the machine and placed in the pocket of the book, which is then ready for the reader. This completes the charging process.
7. Machine switch is turned off.
8. When the roll of photographic paper is completely used, it is developed in the library or sent to the nearest laboratory.
9. Photographic record is filed after it has been developed.

Diebold

1. When the borrower presents the book to be withdrawn from the library and his identification card to the desk assistant, the machine switch is turned on.
2. Borrower's identification card is placed at the left side of the flat bed in front of the machine.
3. Book card is removed from the book pocket and placed beside the borrower's identification card.
4. Prenumbered and predated transaction card is placed beside the book card.
5. Borrower's identification card, book card, and transaction card are pushed through the machine. When the cards emerge in the rear collector tray, they are picked up and inserted in the pocket of the book, which is then ready for the reader. This completes the charging process.
6. Machine switch is turned off.
7. When the film in the magazine has been exposed, it is sent to the nearest laboratory for developing.
8. Microfilm record is filed when returned from the laboratory.



Figure 11. McBee Keysort cards being sorted with a needle.

Discharging routines

1. When a book is returned to the circulation desk the transaction card is removed from the book. If the book is overdue, the fine is computed and collected. If the fine is not collected, a slip record is made of the author and title of the book, the name and address of the borrower, and the amount. This record is kept in a file set aside for the purpose. The borrower's card is not needed for the return of a book. The books are available immediately for circulation.
2. Transaction card is placed in a special file, keeping those for 7-day and 14-day charges separate.
3. Transaction cards may be filed by number immediately and kept in packs, separated according to 7-day, 14-day, or rental books, or they may be filed later when overdue notices are sent. If McBee Keysort punched date due cards are used as transaction cards they can be sorted and filed by means of a sorting needle which resembles a long knitting needle. This "needling" process is simple. A pack of cards is taken from the circulation file. A sorting needle is run through the appropriate hole (Figure 11). The cards on the needle are then pushed against the alignment block in order to make them even. When the needle is raised the cards notched in the one hole drop out. For instance, those

representing overdue 7- or 14-day charges will fall out. The transaction numbers are sorted in the same way — first by thousands, then by hundreds, and finally by tens. The entire file is sorted. The sequence of the cards, whether they fall out or remain in the pack, is not disturbed in any way. Remington Rand and IBM punched cards are sorted and filed with special equipment. IBM equipment and its use are described in Chapter 9.

Renewals

1. If the book is brought to the library for renewal the transaction card is removed and a new charge is made. "Ren" can be written on the card if desired.
2. If the book is not brought to the library the serial number of the transaction card, date book is due, and the author and title of the book are given to the library assistant. A dummy card (often of a different color) giving the above information plus the new due date with the word "Renewal" stamped or written on it is made and inserted in the return file of transaction cards in the proper numerical place. Patron's name and address are added later after the book becomes overdue. When overdue notices are sent, the numbers covered by renewals are represented by these dummy cards and overdue notices are not sent for them until the renewal period is over.

Overdues

1. The transaction cards which have been taken from the returned books are arranged in numerical order by days. This may be done each day for the previous day's returned transaction cards or, for a large circulation, when the books they represent become overdue.
2. The transaction card file for books due on the preceding day is checked for missing numbers. If there are no missing numbers, all the books for that day have been returned. Missing numbers represent overdue books.
3. The film is checked for each missing number by means of the microfilm reader (Recordak and Diebold) or the photographic record (Remington Rand) for the author, title, call number, and borrower's name and address. If a film rewind device is used with the Remington Rand Photocharger the photocopy is placed on it, thus facilitating the reading of the record.
4. Overdue notices are typed in duplicate to provide first and second notices.

5. If a snag file containing a record of books returned without a transaction card is kept, this should be checked before overdue notices are sent.

Reserves

Two methods are suggested by libraries:

1. Visible file of reserve requests, arranged in shelf-list order, is kept at the charging desk and compared regularly with the shelves of returned books. A signaling device can be placed on the book cards of titles having many reserves.
2. Dummies can be made for all titles on reserve and placed in shelf-list order on the shelves where returned books are kept. This shelf is checked with the reserve list.

Circulation statistics

1. If a new series of transaction numbers is used each day, the last numbered card used plus the renewals will give the number of books circulated that day. If numbers continue serially from day to day, the circulation count for any day can be obtained by subtracting the first number used on that day from the last and adding one plus the number of renewals. The same procedure can be followed in compiling monthly circulation statistics.
2. To arrive at a fiction and non-fiction breakdown the following method has been used: a count is made of non-fiction books shelved each day; this number is subtracted from the total circulation figure to give the number of fiction books circulated.

Special routines devised by libraries

For equipment

1. If machine jams, a manual dater can be used until it is in order again to prevent interrupting the service. A method used with the Recordak is to withdraw the book card and write the patron's name and address and the transaction number on it. The transaction card is then placed in the pocket to show the date due. A record of the transaction card numbers used in this manner is kept with the date. Book cards are filed in shelf-list order by due date. It is not necessary to date each card individually, as the group can be filed under a single date.
2. Same type of date due cards as included in Detroit Self-Charging System can be used by numbering on the left side for 7-day books and on the right for 14-day books (or vice versa).

3. Transaction cards can be reused by renumbering every three weeks for 7-day books and every six weeks for 14-day books, thus avoiding confusion; or old numbered transaction cards can be reused every six months.
4. Transaction cards can be used for three or more different due dates merely by staggering the numbers on the date due cards to represent different periods of charging. The identification of the book will show whether it is a 7-day or a 14-day book, thus providing an additional check in case the wrong date due card is used.
5. Other means of identification, such as a driver's license or even a slip with the signature of the borrower and his address, may be used instead of a borrower's identification card.
6. Instead of a book card, a slip or book pocket giving author, title, and call number of the book can be pasted on the upper right-hand corner of the inside back cover for use with the Recordak or Remington Rand machines. This information can also be written on the inside back cover of the book. If this method is used in connection with the Remington Rand Photocharger the transaction card should be placed in the book pocket or below the author, title, and call number if written on the book and borrower's card (but below the serial number) before pressing the treadle in the charging process.
7. Blue ink does not photograph well and should not be used.

For charging routines

1. The loan period or the kind of material charged out can be indicated by a color or a symbol on the transaction card.
2. Serial numbers used each day can be recorded in a small notebook and kept near the machine. This not only makes it easier to locate transaction cards for each date but also serves as a circulation count.
3. If an error is made, the word "error" can be written on the card and the charge repeated.
4. If several books are being charged to one person, the borrower's identification card is left on the Recordak machine or Remington Rand Photocharger until all books are charged. It is not possible to do this with the Diebold machine, since the card must be picked up after each book is charged.
5. A manual counter is used to record the number of juvenile books circulated. The number thus recorded is subtracted from the day's total circulation to obtain the number of adult books circulated.

6. Each day's date is photographed at the beginning of the film for that day.
7. At the end of a day's circulation, the word "End" is written lightly on the next unused transaction card and photographed. This can be erased and the card returned to the pack.

For charging special materials

1. Rental books. Corners of the book cards can be clipped off to indicate rental books or word "Rental" stamped on the transaction cards, which are usually dated as of the current date.
2. Interlibrary loans. Date slip is placed in the book pocket by the owning agency. Colored book card is made with letters "ILL" written across the top, giving call number, copy number, author, title, name of the owning agency, and date due. This card can be issued on either machine in the usual manner.
3. Periodicals and extended loans are usually charged by hand.
4. Pamphlets, clippings, and phonograph records are usually charged by hand in the department owning the material, since it is difficult and unsafe to clip a transaction card to such material.

For discharging routines

1. If books are returned without a transaction card a dummy card bearing the name of the author, title, and call number is made and placed in a snag file, which should be checked for overdues.
2. Record of all books returned with missing transaction cards is kept as a check in case the borrower says a particular book has been returned.
3. A charge of two to five cents is made for each missing item in the book pocket when the book is returned.
4. Serially numbered transaction cards are broken down into thousands and kept in large groups until they become overdue instead of filing at the end of each day.
5. If a book is reported lost, this information is penciled on a duplicate overdue record and filed in a snag file. If the book is reported lost before it is due, a bill cannot be sent until the charge turns up in the overdues, since there is no other way to find it on the film.

For overdue routines

1. Monthly charts have proved to be helpful, showing for each day: the serial numbers for each loan period for all books charged; the number of the film or films photographed; the

date on which the books will be due; and on what dates successive notices should be sent.

2. An aid in checking overdues is to make a list of missing numbers and to check the transaction cards returned with overdue books against this list. These cards should be kept separate from other transaction cards.
3. A colored slip placed in the serial file of transaction cards for the location of missing numbers has proved to be a useful aid. This slip is kept in the pack until the transaction card is finally filed.
4. Missing numbers can be clipped from the photographic film and placed in an envelope until the overdue notices are typed. The unwanted portion of the film can then be discarded.
5. A second photocopy of the Photocharger image can be made by a Photoclerk, a machine used for copying records.⁷ This can be inserted into a window envelope for mailing, thus eliminating the costly writing of overdue notices and the possibility of error on the part of the staff. It also presents the proof of the transaction to the borrower.
6. If McBee Keysort transaction cards are used libraries have suggested that they be filed only once a week. Missing numbers for each date can be recorded on a plain white card and placed in front of the day's pack.
7. Repeated checking should be made of duplicate transaction cards for the original cards.
8. For books which the patron has said he has returned, the following procedure has been used. After checks are made in the serial file of transaction cards and on the shelves, a card for the book is placed in a visible file at the circulation desk, and a special section of the overdue file is labeled "Says returned." After six months, the book is treated as a lost book.

For circulation statistics

1. A tally sheet or a manual counter can be kept at the circulation desk to note the number of fiction books, non-fiction books, or periodicals circulated each day.
2. If an estimate by classes is necessary, a sampling of the film can be taken or the film can be read back during slow periods at the circulation desk.

⁷Ralph R. Shaw, *The Use of Photography for Clerical Routines* (Washington, D. C., American Council of Learned Societies, 1953).

Advantages

In general

1. Savings are effected in operations, records, and supplies. Numerical registration file, typing and retyping book cards, slipping of books, arranging and counting daily circulation have been eliminated. In addition, the charge file by call number or by author and title under date due is no longer necessary.
2. Speed and accuracy in charging and discharging procedures. Withdrawing the transaction card is more rapid than searching for a book card in the circulation file, and the books are ready for circulation as soon as this card has been removed from the book pocket. Numerical hand filing of small digits or mechanical filing of punched cards is quicker than sorting by author and title or by a long call number. Finally, there is no chance of error when the borrower's card and book card are photographed.
3. Film or photograph makes a complete and permanent record of all books withdrawn from the library.
4. Professional and clerical duties are clearly separated with the result that the public receives better service.
5. Installation is simple and is accomplished without much change in supplies.
6. Counting of daily circulation is easy, since the first and last numbers on the transaction cards used for a given day plus the renewals indicate the number of books withdrawn.
7. Identification other than the borrower's card can be used for charging out books.
8. Circulation desk is neat and free from clutter of unslipped books.
9. Patrons do not take part in any of the charging process.
10. Flexible enough to be used throughout a large library system.
11. All handwriting is eliminated.
12. Only a few assistants needed at the circulation desk, since only one person can use the machine at a time.
13. Eye strain and mental fatigue are kept at a minimum. It is less tiring to use a machine than to write a number and check or stamp cards.

Recordak

1. Built-in reader is convenient and eliminates the need for additional equipment.
2. Machine can be rented or purchased.

3. The second reader, if purchased, can be used also with a microfilm collection.

Remington Rand

1. No reading machine is necessary.
2. Automatic processor eliminates sending film to a laboratory for developing.
3. Machine is fairly compact.

Diebold

1. Small, compact machine, weighing only twenty pounds, makes only a slight barrier between the desk assistant and the library patron.
2. Change of film, contained in the magazine, easily accomplished with a minimum of time and effort.
3. Machine particularly useful for charging out books at meetings not held in the library, since it is light enough to be carried easily.
4. Can be combined easily with a 2" x 5" book and date card. Some libraries wish to use this size card.

Disadvantages

In general

1. Handling of reserves is not completely satisfactory. Although a visible file or dummy system has proved to be helpful in many libraries, much depends on the memory of the desk assistant.
2. Location of a certain book in the circulation file is difficult. It can only be done by running the films through the reader or by looking at all the photographs.
3. Borrower has no record of books taken or returned. However, the majority of librarians do not now consider this as great a disadvantage as they formerly did.
4. There is no method for proving that a given book has not been returned. The charging record can prove only that the borrower did actually charge out the material, not whether he has returned it.
5. Taking of inventory is difficult. Books can be inventoried only when they are in the library, as no cards for books out on loan are available.
6. Some circulation statistics are unavailable, such as the number of times a certain book has been circulated and the last date on which a specific book was loaned. Daily statistical breakdown by classification number is generally not possible.
7. Snags can result from missing transaction cards. A record

of books returned without transaction cards can be made, however, and kept in a special file in the circulation desk.

8. Machine can fail.

Recordak

1. Size of machine presents a public relations problem as it causes a physical barrier between the assistant and the library patron. The machine can be turned sideways on the circulation desk, thus overcoming this disadvantage.
2. Microfilm not always legible, although for the most part the readability depends on the machine used, newer models producing more legible microfilm.
3. Glare of lights in microfilm reader sometimes causes eyestrain.
4. It is not easy to insert the film in the machine.

Remington Rand

1. Purchase price of machine, which cannot be obtained on a rental basis, other than a purchase lease arrangement, could be prohibitive to some libraries.
2. Reports have shown that the indicator on some models does not always register the amount of the film that is left on the reel. This machine failure probably will be corrected in newer models as they are produced by the manufacturer, as has been done with the older ones which did not always record the charges.

Diebold

1. Charging routines are slow to handle, especially when a borrower takes out more than one book. It is necessary to pick up the borrower's card from the rear collection tray and place it on the surface in front for each book withdrawn. The Diebold Company suggests the use of an acetate sheet, folded and stapled in three sections, into which is inserted the borrower's card, the book card and the transaction card. The sheet holding these three items is put through the machine. The borrower's card does not need to be removed from the acetate sheet but can remain in it during the charging out of several books, thus eliminating the constant handling of one card. Libraries using the Diebold machine have reported, however, that this disadvantage is not actually a problem.
2. It is necessary to use the entire reel for charging purposes before overdues can be sent, since it is impractical to cut the film. With a capacity of approximately 2900-4000 charges on one reel, this means that the names and ad-

dressess of delinquent borrowers may be needed before the reel is completed. This makes it necessary to waste a part of the film, causing extra expense.

3. Microfilm reader is necessary since the machine does not contain one.

Photographic charging opened up an entirely new conception of circulation procedures. The discarding of the file of book cards arranged by date due and substitution of serially numbered cards to serve as date due cards was a radical departure from the current thinking among librarians. To this change was added a machine which would photograph the transaction. After the initial break with tradition was made, numerous possibilities for using transaction cards with or without machines were seen and experimented with by alert librarians.

Audio Charge System

Closely related to the Photographic Charging System is the audio charge, sometimes called Dictaphone charging. It is the same in principle, but an audible rather than a visual record of the charge is made. It is therefore a transaction card system and presents some of the advantages as well as some of the problems of the Photographic Charging System. The first record of its use is found in the report of the St. Louis County Public Library for 1948-1949.¹ At that library experiments with a tape recorder and a commercial dictating machine were made. From these experiments it was found that a dictating machine, such as the Soundscriber or Gray Audograph, is more adaptable to this system of book charging than a tape recorder.

Equipment used

1. Registration file of all borrowers, both adult and juvenile. This consists of an alphabetical file of the application blanks of the registered borrowers.
2. Dictating machine: Gray Audograph Dictating Machine (Figure 12) and transcriber or Soundscriber recorder and playback equipment are the two machines currently used in libraries. Both machines include a hand microphone into which the assistant speaks to record the charge. A recording disc is placed on a turntable on the top of the machine and works in the same manner as a phonograph. An index

¹*Third Annual Report of the St. Louis County Library*, April 1948-May 1949, p. 7.

strip inserted on the front is used for recording transaction numbers.

3. Serially numbered transaction cards, either 3" x 5" cards or punched cards. These serve as date due cards. The punched cards used by libraries with this system are those made by McBee. Punched cards rather than 3" x 5" cards are recommended in order to maintain the highest efficiency in performing the routines involved in the system.
4. Recording discs.
5. Borrower's identification card.
6. A supply of index strips for use on the machine.
7. Envelopes for easy identification in filing discs.
8. Book pockets giving the call number, author, and short title for each non-fiction book and author and title for each fiction book circulated. In addition, the accession or serial number of each book is added.
9. Fine record slips.
10. Grease pencil for use on the Soundsciber disc.
11. Circulation statistical record sheets.
12. Overdue postal cards.

Charging routines

1. Disc is placed on the recording machine.
2. Book to be withdrawn from the library and borrower's identification card are presented by the patron to the desk assistant.
3. Transaction card, serially numbered and predated, is placed in the pocket of the book to be loaned.
4. Foot switch of the machine is depressed during the recording process.
5. Following information is dictated into the microphone and recorded on the disc.
 - a. Transaction card number.
 - b. Author and title of the book and/or classification number, accession number, or serial number, whichever is used.
 - c. Reader's name and address, taken from the borrower's identification card or borrower's card number, whichever is used.
6. Borrower's identification card and book are given to the reader. This completes the charging process.
7. First and last transaction numbers used on each disc are entered on the index strip and on the envelope holding the record.
8. Discs and index strip for each day's circulation are filed.

Discharging routines

1. When a book is returned to the circulation desk, the transaction card is removed from the book pocket and dropped into the appropriate file. The book is ready for circulation unless it has been reserved. If the book is overdue, the fine is computed and collected. If the fine is not paid at this time, a slip record is made of the author and title of the book, date due, and borrower's name and address. This record is placed in a designated spot in the circulation tray.
2. Transaction cards are filed by number. If punched cards are used, the filing is done mechanically.

Renewals

1. If the book is brought to the library it is treated as a new charge.
2. If the book is not brought to the library a transaction card of a different color is made out, giving the transaction number of the original loan, the author and title of the book, and the borrower's name and address.
3. Cards are refilled in their numerical place in the master file or placed in a special renewal file.

Overdues

1. File of transaction cards for books due on a given day is checked for missing numbers.
2. Disc for overdue day's circulation is placed on the machine nearest to the missing number, using the figure noted on the envelope or index strip as a guide.
3. Machine is set at the playback position.
4. Transaction number, author and title of the book, and the borrower's name and address are ascertained by listening to the record.

Reserves

Reserves are handled in the same way as in other transaction card systems; that is, by using a visible index or a dummy system for all books on reserve (see Chapter 7).

Circulation statistics

Daily circulation statistics are obtained by subtracting the number on the first transaction card used on a given day from the last plus one and adding the renewals.

Special routines devised by libraries

For charging routines

1. Words "first," "next," and "over" are used to indicate the beginning, middle and end of each charge.

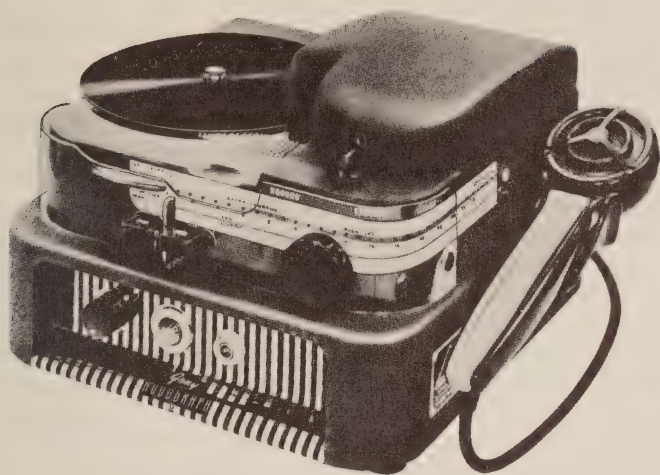


Figure 12. Gray Audograph Dictating Machine, showing the hand microphone, the recording disc on the turntable, and the index strip on which the transaction numbers are recorded.

2. Various colored transaction cards and different series of numbers are used to indicate different loan periods, adult books, juvenile books, periodicals, pamphlets, recordings, and films.
3. Special charges, such as loans to schools or loans for special periods, are made on smaller discs with different colored cards and serial numbers, or on a separate machine.
4. Foreign words and difficult words are spelled out by the desk assistant.
5. In the use of the Gray Audograph, the end key is punched after every tenth transaction number, making a hole in the index strip. This helps in locating information for overdue books.
6. Transaction card number is written at the end of each hour on the record envelope in line with the indicator number which will be in the center of the index strip at that time. This is an aid in determining in which position to place the disc when sending overdues.
7. First transaction number used for each record is penciled on the disc to avoid difficulty if the envelope is separated from the record.
8. Other means of identification may be used in place of borrowers' cards.

For discharging routines

1. If books are returned without a transaction card, a dummy card bearing author, title, and call number is made and placed in a snag file, which should be checked for overdues.
2. Record of all books returned without transaction cards is kept as a check in case borrower says a particular book has been returned.
3. A charge of two to five cents is made for each missing item in the book pocket when the book is returned.
4. Serially numbered transaction cards are broken down into thousands and kept in large groups until they become overdue instead of filing at the end of each day.
5. If a book is reported lost, information about the loss is penciled on a duplicate overdue record and filed in a snag file. If the book is reported lost before it is due, a bill cannot be sent until the item turns up in the overdues, since there is no other way to find it on the disc.

For overdue routines

1. Notices are typed in duplicate for first and second notices or in quadruplicate for filing numerically by transaction number and by name of borrower for "black list" record.
2. Colored card is used for overdue information.

Advantages

1. Speed and accuracy in charging and discharging procedures. Withdrawing the transaction card is more rapid than searching for a book card in the circulation file, and the books are ready to be shelved as soon as this card has been removed from the book pocket. Numerical hand filing of small digits or mechanical filing of punched cards is faster than sorting by author and title or by a long call number.
2. Elimination of some records and operations, such as book cards, numerical file of registered borrowers, slipping of books, arranging and counting daily circulation, and typing book cards. In addition, the charge file by call number or by author and title under date due is no longer necessary.
3. Neater-appearing circulation desk because of the elimination of the slipping process, which necessitates leaving numerous books on the desk, especially during rush hours.
4. Professional and clerical duties clearly separated with the result that the public receives better service.
5. Only a few assistants needed at the circulation desk, since only one person can use the machine at a time.
6. Problem of incorrect addresses of borrowers in the files

solved, because the reader will usually give his new one when he hears his old address being spoken.

7. Counting of daily circulation easier, since the first and last numbers on the transaction cards used for a given day plus the renewals indicate the number of books withdrawn.
8. Permanent record on the discs of all books withdrawn, provided the discs are not processed for reuse.
9. Overdue information can be taken directly from the disc.
10. Installation is simple and is accomplished without too much change in supplies.
11. Identification other than a borrower's card can be used for charging out books.
12. Patrons do not take part in any of the charging process.
13. Flexible enough to be used throughout a large library system.
14. Elimination of all handwriting in charging.
15. Businesslike method for performing circulation procedures.

Disadvantages

1. Objection by borrowers to having their names and addresses, connected with the titles of certain books being withdrawn, read aloud for all to hear. Suggested remedies for this objection have been worked out by some libraries: a microphone can be placed in a sound-absorbent half-size telephone booth, thereby muffling the assistant's voice; the accession number for each book borrowed can be used instead of the author and title; or the borrower's number may be used instead of his name and address.
2. Necessity for clear enunciation and spelling of difficult words in order to obtain information for overdues.
3. Since machine can be used by only one person at a time, additional playback equipment is needed unless overdues are done during slow periods.
4. Serial or transaction numbers can be transposed when they are being dictated into the machine, especially during rush hours or towards the end of the day.
5. Finding exact spot where overdue book is charged on record is sometimes difficult, although skill can be achieved.
6. "Mike fright" is sometimes developed by assistants.
7. Handling reserves is not completely satisfactory. Although a visible file or dummy system has proved to be helpful in many libraries, much depends on the memory of the desk assistant.
8. The following information is not available: circulation count by classification number, the number of times a book

has circulated, the date a specific book is due and to whom it is charged.

9. Taking of inventory difficult. Books can be inventoried only when they are in the library as no cards for books out on loan are available.
10. Location of a certain book in the circulation file is difficult. It can be done only by playing back the disc.
11. Reader has no record of books taken or returned.
12. Snags can result from missing transaction cards. However, a record of books returned without transaction cards can be made and kept in a special file.
13. Machine can fail.
14. Lack of a method for proving a given book has not been returned. The charging record can prove only that the borrower did actually charge out the material, not whether he has returned it.

The use of dictating machines in circulation procedures is a fairly recent development. Employing transaction cards to give the date due information, the Audio Charge System has the same problems and advantages as other charging systems utilizing this type of card. The system has been used successfully by a number of libraries, which have found it particularly effective for charging routines on bookmobiles. In addition, it is used in main libraries and branch library systems.

IBM Circulation Control System

In 1940 the Board of Trustees of the Montclair, New Jersey, Public Library asked the International Business Machines Corporation to conduct an experiment for developing a circulation system which would reduce the time and manual labor involved in the circulation of books to library patrons. Four IBM machines were installed in the library for this purpose. Reports show that the system used in the Montclair Library has worked quite well in the main library, but that the handling of circulation in the branches has not been entirely satisfactory.¹ Since the company is not offering the Montclair system to the library world until a low-cost unit card for branch circulation purposes has been perfected,² it is not described in this book.³ The results of the Montclair experiment, however, led the International Business Machines Corporation in cooperation with two libraries⁴ to develop what is known as the IBM Circulation Control System, which was shown for the first time at the 1947 American Library Association Conference in San Francisco. Since this system is a transaction card method for charging books, the same basic features of keeping the arrangement of the record of the loan in

¹Ralph H. Parker, *Library Applications of Punched Cards; a description of mechanical systems* (Chicago, American Library Association, 1952), p. 31.

²*Ibid.*

³For a full description see Parker, *op. cit.*, p. 31-37.

⁴Detroit, Michigan, Public Library and Stockton and San Joaquin County (California) Free Library.

one numerical order is present as in those already described. However, the filing of these transaction cards is accomplished with IBM equipment.

Equipment used

1. Registration file of all borrowers. This consists of an alphabetical file of the application blanks of registered borrowers, both adult and juvenile.
2. IBM Time Stamping Machine (Figure 13). This is a small, compact piece of equipment which sits on the circulation desk.
3. Punched transaction cards, 3 1/4" x 4 7/8". The card used in the Detroit Public Library has spaces for at least 16 charges, whereas that used by the Stockton Public Library can be used only twice (Figure 14). These may be purchased with pre-punched code numbers, which indicate month and day due, transaction number (or loan number), card deck number, and branch symbol. An automatic stamping machine may be used with a punched card. Decks of cards imprinted with stripes of different colors are used to indicate different weeks.
4. Loan slips, which have space to enter the author and title of the book to be withdrawn, the borrower's name and address, and the stamping of the transaction or loan number, date due, and branch symbol.
5. Serially numbered deck of master cards.
6. Book pockets 1/8" wider than for 3" x 5" book cards to accommodate the transaction cards, which are 3 1/4" wide. Book pockets give the call number, author, and short title for each non-fiction book and author and title for each fiction book circulated. Some libraries omit the author and title for non-fiction, giving only the call number.
7. Card sorter, which sorts and files cards by the branch name or number, date due, and transaction number.
8. Collator, which can merge two decks and sort out the missing transaction cards.⁵
9. Reproduction punch for punching new cards.⁶
10. Card interpreter which interprets in print the information punched on the cards.⁶
11. Box for date cards.
12. Tray for numbered loan slips.

⁵Process of searching for missing numbers also can be done by hand.

⁶This process can be done at a local IBM office if the Library does not wish to purchase the equipment.

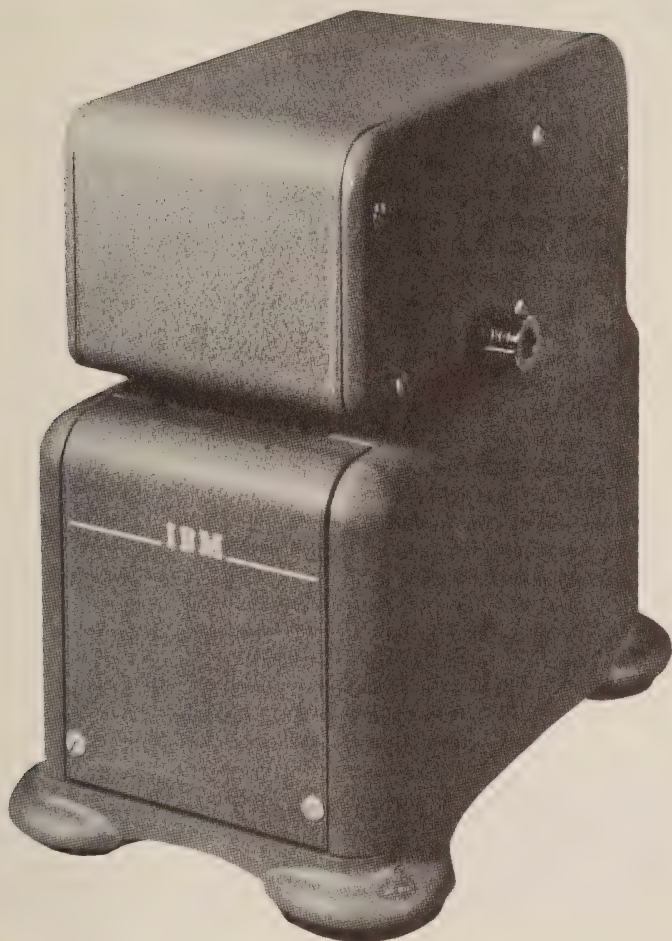


Figure 13. IBM Time Stamping Machine, showing the open slit into which the loan slip is placed for recording the transaction. The knob at the right is used to turn back the numbering to 00000 when a new deck of transaction cards is put into use.

- 13. Fine record slips.
- 14. Circulation statistical sheets.
- 15. Overdue postal cards.

Charging routines

1. Time stamping machine is turned back to 00000 when a new deck of transaction cards is used.

KEEP THIS CARD IN THIS POCKET

<div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; background-color: #f0f0f0;"></div>	<div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; background-color: #f0f0f0;"></div>	<div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; background-color: #f0f0f0;"></div>
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DATE DUE
IS LATEST DATE

51955
JAN 26

1234-123
LOAN NUMBER

NO RENEWALS

DETROIT PUBLIC LIBRARY

IBM 32075

1 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65

1 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65

1 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65

1 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65

Figure 14a. Punched transaction card, IBM Circulation Control System. The punches on the Detroit Public Library card indicate the month and date due, the transaction or loan number, card deck number, and the branch. This information is also stamped on the card. The charted space on the left is for the date due. Each card has a colored stripe on the right to indicate the card decks used for different weeks.

2. Loan slip for book to be withdrawn is filled out by the borrower giving his name and address, author and title for books of fiction, and call number and copy number for non-fiction. If more than one book is borrowed at one time, it is necessary to include the name and address only on the first slip, since the succeeding slips will be filed in numerical order with the one bearing the borrower's name and address.
3. Loan slip and borrower's identification are presented with the book to the desk assistant.
4. Loan slip is checked for accuracy by assistant.

IBM 32073

PLEASE KEEP THIS CARD IN BOOK POCKET

0602	45000	
MO.	WEEK	NUMBER
BRANCH		WITHDRAWAL TRANSACTION

THE PUBLIC LIBRARY
STOCKTON AND SAN JOAQUIN COUNTY

21 22 23 24 25 26 27 28 29	9 9 9 9 9 9 9 9 9	8 8 8 8 8 8 8 8 8	7 7 7 7 7 7 7 7 7	6 6 6 6 6 6 6 6 6	5 5 5 5 5 5 5 5 5	4 4 4 4 4 4 4 4 4	3 3 3 3 3 3 3 3 3	2 2 2 2 2 2 2 2 2	1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0	BRANCH	MO.	WEEK	NUMBER	TRANSACTION
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THE PUBLIC LIBRARY
STOCKTON AND SAN JOAQUIN COUNTY

WITHDRAWAL TRANSACTION		BRANCH
MO.	WEEK	NUMBER
0608	45000	

PLEASE KEEP THIS CARD IN BOOK POCKET

- Figure 14b. Punched transaction card, IBM Circulation Control System. On the card used at the Stockton and San Joaquin County Free Library the branch number or symbol, transaction card number, and month and day due are punched into the face of the card as well as stamped at the top.
- Loan slip is inserted into the time stamping machine which instantly and automatically prints on it the transaction or loan number, the due date (month and day) and the name and number which identifies the main library or branch from which the loan is being issued.
 - Loan slips are placed face down in the charging tray in order to keep the numerical sequence.
 - Pre-punched, prenumbered and predated transaction card is inserted in the pocket of each book being circulated. This completes the charging process.
 - At the end of the day the pack of loan slips is put under a

due date compartment in a designated part of the circulation desk.

Discharging routines

1. When a book is returned to the circulation desk the transaction card is withdrawn from the book pocket and placed in a holding file in the desk. If the book is overdue, the fine is computed and collected. If the fine is not paid at this time, a slip record is made of the author and title of the book, the borrower's name and address, and the amount of the fine. This record is filed in a designated spot in the circulation tray. The book is ready to be shelved unless it has been reserved.
2. Transaction cards are held together for each daily or weekly period.

Renewals

1. If the book is brought to the library for renewal, it is treated as a new charge.
2. If the book is not brought to the library, a special slip giving the call number, previous due date, transaction number, and new due date is made and attached to the loan slip.

Overdues

The period of loan may vary, although four-week periods are being recognized by librarians as workable. Usually, one day of the week is chosen as the due date. In the case of a large branch system, different due dates for each branch will enable the tabulating room and the overdue notice unit to handle approximately the same number of overdues each working day.

1. Returned transaction cards are arranged in the card sorting machine by transaction or loan number. These represent returned books. This process can be done by hand if the library does not purchase a card sorting machine.
2. Transaction cards are automatically compared with a complete master deck of numbered cards by means of the collator machine. Each card for which there is no matching transaction card will be sorted out, thus giving a pack of cards numerically arranged by transaction or loan number representing books that are overdue.
3. Numbered loan slips bearing the borrower's name and address for each overdue transaction or loan are pulled from the numerical file. Remaining loan slips, representing books returned, are usually destroyed.
4. Overdue notices are typed in duplicate. The original is

sent to the patron (window envelopes can be used); the duplicate is filed to be used as needed.. Duplicates can be attached to the loan slips. As overdue books are returned, the transaction cards are matched and the duplicate overdue notices are destroyed. Those which remain when the second notice period is reached are mailed to the patron. With the use of the Remington Rand Photoclerk, overdue notices can be photographed on 3" x 5" slips and enclosed in window envelopes.

Reserves

Reserves are usually handled by means of a visible record of the type described in Chapter 7.

Special routines devised by libraries

1. Vacation loans are charged manually, using a separate "vacation deck" of transaction cards. Loan slips are filled out in the usual manner. The transaction or loan number is taken from the vacation deck of transaction cards and written on the loan slip. Transaction date card from the vacation deck is placed in the book. Loan slip is filed behind "vacation" guide in the charge tray.
2. Rental books are charged with a "rental deck" of transaction cards of a special color. Routines are as follows:
 - a. Loan slip is stamped with the current date.
 - b. Transaction or loan number from the card in the rental deck is copied on the loan slip.
 - c. Transaction date card is placed in the book.
 - d. Completed loan slip is filed face down in a loan slip box.
3. Recordings are charged and discharged by hand. Transaction cards of a special color may be used. Number of the transaction card is copied on the loan slip, which is filed in a special place. Recordings circulated on a rental basis can be charged in the same manner as rental books.
4. Pictures are charged in the same way as books, using one loan slip to cover the transaction.
5. Interlibrary loans are charged in the same way as books.
6. Snags, such as lost date due cards, and books which borrowers claim have been returned, can be recorded on slips or blank transaction cards.

Circulation statistics

Statistics for daily circulation are obtained by subtracting the transaction number on the first loan slip from that on the last and adding one. To this figure is added the number of renewals.

Advantages

1. Speed and accuracy of charging and discharging procedures. Withdrawing a transaction card is more rapid than searching for a book card in the circulation file, and books are ready to be shelved as soon as this card has been removed from the book pocket. Numerical hand filing of small digits or mechanical filing of punched cards is quicker than sorting by author and title or by a long call number.
2. Elimination of many records and routines associated with the older types of charging systems, such as book cards, numerical registration file, borrower's cards, slipping books, typing book cards, and arranging and counting daily circulation.
3. Businesslike method for performing circulation procedures.
4. Professional and clerical duties clearly separated with the result that the public receives better service.
5. Only a few assistants needed at the circulation desk, since only one person can use the machine at a time.
6. Neater-appearing circulation desk because of the elimination of the slipping process, which necessitates leaving numerous books on the desk, especially during rush hours.
7. Counting of daily circulation easier, since the first and last numbers on the transaction cards used for a given day plus the renewals indicate the number of books withdrawn.
8. One due date a week and a four-week loan for all books, if used, simplifies and consolidates the charge files and reduces the number of overdue routines.
9. Flexible enough to be used throughout a large library system.
10. Borrowers' slips can be used for a complete and permanent record of all books withdrawn if the library wishes to keep them.
11. Centralization of records at the main library reduces the number of charging routines at the branches.
12. Signature of borrower prevents arguments about whether or not he has checked out a given book.
13. Borrower's slips available for analysis of any kind. These slips give all the data a borrower's card can give.
14. Eyestrain and mental fatigue kept at a minimum. Operating a machine plus the simple procedures followed are less tiring than writing numbers and checking or stamping cards.

Disadvantages

1. Difficulty in handling reserves. However, the Detroit Public Library reports that reserve routines under this system are better, faster, and just as accurate as those used under the systems using book cards.

2. Difficulty in making a circulation classification count. The use of spot checks, by making a statistical breakdown of the borrower's slips, has proved sufficient in the Detroit Public Library.
3. Reader has no record of the books taken or withdrawn.
4. Location of a certain book in the circulation file is difficult. Librarians indicate that this is necessary only on rare occasions.
5. It is necessary for borrowers to perform part of the charging process. However, this is not considered to be a disadvantage by some library staffs.
6. Illegibility of charge slips possible. However, doubtful signatures and inaccurate author and title information can be caught by the desk assistant when the book is charged out to the patron.
7. New book pockets wide enough to accommodate 3 1/4" transaction cards are needed.
8. Cost for rental of equipment is high.
9. Machine can fail.
10. Taking of inventory difficult. Books can be inventoried only when they are in the library as no cards for books out on loan are available.
11. Change of address is not always recorded, since no borrower's identification card is presented at the time a book is withdrawn. Patrons do not always give this information voluntarily.
12. Snags can result from missing transaction cards. A record of books returned without transaction cards can be made, however, and kept in a special file in the circulation desk.
13. Lack of a method for proving a given book has not been returned.

The routines which have been worked out by the Detroit and Stockton public libraries in cooperation with the International Business Machines Corporation indicate that the IBM Circulation Control System can be used successfully in both a large library system with over four million yearly circulation and a medium-sized one which issues over six hundred thousand books for the same period. A large system with a large budget probably would wish to have its own punching and sorting equipment, but it is still possible for a smaller library with a smaller budget to have some of the costlier routines performed at a local IBM office. In other words, it matters little whether this charging system is used in large or medium-sized libraries, since the procedures can be worked out as effectively in one as in the other.

IBM Modification

A modification of the IBM Circulation Control System which uses less expensive equipment and supplies was devised by George W. Young while he was librarian at the Mill Valley, California, Public Library in 1948.¹

Equipment used

1. Transaction control cards punched on two sides but undated. McBee Keysort or 3" x 5" cards are used with this system.
2. Predated charge slips which allow space for the writing in of the author and title of the books to be circulated and the borrower's name and address.
3. Numbering machine similar to the kind used for accessioning. Six-wheel numbering machine with provision for depressing the zeros to keep them from printing has been found to be useful. With it, a five-figure number, with a space between the first and second digits, e.g. 0 0001, can be produced. Prefix numbers are changed at the beginning of each week, with the series repeated every ten weeks.
4. Punch (Hand or Tri-mee 303 punch recommended).
5. Fine record slips.
6. Needle for sorting cards (McBee Keysort or a 12-inch No. 2 knitting needle).
7. Date due slips to be pasted in the book. By utilizing these,

¹This chapter is based on data in the article by G. W. Young, "Borrower Merely Signs His Name," *Library Journal*, LXXIV (January 1, 1949), 12-16.

undated transaction cards can be used at fairly frequent intervals.

8. Book pockets giving the call number, author, and short title for each non-fiction book and author and title for each fiction book circulated. Some libraries omit the author and title for non-fiction, giving only the call number.
9. Circulation statistical sheets.
10. Overdue postal cards.
11. Colored pencil.

Charging routines

1. Predated charge slip is made out by borrower giving his name and address and the author and title of the book.
2. Book is brought to the circulation desk by the borrower.
3. Transaction or renewal number is stamped on the charge slip by the desk assistant with the numbering machine.
4. Transaction card bearing the same number is inserted in the book pocket.
5. Date due slip in the book is stamped. This completes the charging process. Books are usually due on one day a week with this system.
6. A designated spot on the charge slip is checked to indicate adult or juvenile loans, rental books, etc. The color of the check indicates the staff member who completed the transaction.

Discharging routines

1. When a book is returned to the circulation desk the transaction card is removed from the book pocket and placed in a designated spot on the desk. The book is ready to be shelved unless a reserve has been placed on it. If the book is overdue, the fine is computed and collected. If the fine is not paid at this time, a slip record of the author and title of the book, the borrower's name and address, and the amount of the fine is made. This record is placed in a designated spot in the circulation tray.
2. Transaction cards are sorted with a needle by prefix number and stored in the desk until the overdues are to be sent.

Renewals

1. If the book is brought to the library for renewal, it is treated as a new charge.
2. If the book is not brought to the library, a colored slip is used for recording the author and title of the book, transaction card number, and new due date. This slip is placed in the proper place in the transaction card file.

Overdues

1. Transaction cards, which have already been arranged by prefix number, are sorted manually by transaction number.
2. Set of cards is examined for missing numbers.
3. There will be a charge slip in the file for each missing number in the set of transaction cards. Borrower's name and address are ascertained from these charge slips and overdue notices are sent. Charge slips are removed with transaction cards from the pack as the books are returned.

Reserves

Reserves are handled in the same manner as under other transaction card charging systems (see Chapter 7).

Circulation statistics

1. Daily and weekly circulation statistics are kept by subtracting the number on the first transaction card or charge slip from the last number used plus one and adding the number of renewals.
2. The number of fiction, non-fiction, and juvenile books circulated on a given day or week is found by counting the colored checks on the charge slips. Location of the check indicates the type of book borrowed.

Advantages

1. Less costly than the IBM Circulation Control System on which it was modeled. No costly machines are necessary and the supplies are fairly inexpensive.
2. Speed and accuracy in charging and discharging procedures. Withdrawing the transaction card is more rapid than searching for a book card in the circulation file, and the books are ready to be shelved as soon as this card has been removed from the book pocket. Mechanical filing of punched cards is quicker than hand sorting by author and title or by a long call number.
3. Elimination of many records and routines associated with the older types of charging systems, such as book cards, numerical registration file, slipping books, typing book cards, and arranging and counting daily circulation.
4. Professional and clerical duties clearly separated with the result that the public receives better service.
5. Borrowers' slips available for analysis of any kind. This slip gives all the data formerly available on a borrower's card.
6. Eyestrain and mental fatigue kept at a minimum. The sim-

ple procedures used are less tiring than writing a number or checking or stamping cards.

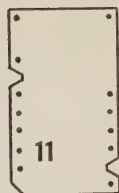
7. Only a few assistants needed at the circulation desk. Not more than two assistants are possible, as only one numbering machine can be used.
8. Neater-appearing circulation desk because of the elimination of the slipping process, which necessitates leaving numerous books on the desk, especially during rush hours.
9. Counting of daily circulation easier, since the first and last numbers on the transaction cards used on a given day plus the renewals indicate the number of books withdrawn.
10. One due date a week simplifies and consolidates the charge files and reduces the number of overdue routines.
11. Use of a date slip in the book provides a permanent record of the use of the book.
12. Snags apt to be rare, because without book cards and with only a transaction card and a charge slip the discharging process is simple and easily accomplished.
13. Overdues simply handled. The necessary information is quickly found on the charge slip, which includes the transaction number.
14. Borrowers' slips can be used for a complete and permanent record of all books withdrawn if the library wishes to keep them.
15. Signature of borrower prevents arguments about whether or not he has checked out a given book.

Disadvantages

1. Handling reserves is not completely satisfactory. Although a visible file or dummy system has proved helpful in many libraries, much depends on the memory of the desk assistant.
2. Reader has no record of the books he has taken or returned.
3. Difficulty in making a circulation classification count, if one is needed.
4. Location of a certain book in the circulation file is difficult.
5. Taking of inventory difficult. Books can be inventoried only when they are in the library as no cards for books are available.
6. Change of address not always recorded since no borrower's identification card is presented at the time a book is withdrawn. Patrons do not always give this information voluntarily.
7. Borrowers perform part of the charging process. In some communities this does not present a problem.

8. Illegibility of charge slips possible. However, doubtful signatures and inaccurate author and title information can be caught by the desk assistant when the book is charged out to the patron.
9. Long line of readers may occur, especially in rush hours, since it is necessary to perform two processes: stamping the transaction number on the charge slip and the date due on the slip in the book. The Mill Valley Public Library reports, however, that these two operations can be performed at the same time by using both hands.
10. Lack of a record for proving that a book has not been returned.

This method for charging out books resembles in many of its routines not only the IBM Circulation Control System but the Wayne County Charging System as well. By using inexpensive equipment with transaction cards, this system is appropriate for use in small public libraries having an average circulation of approximately two or three hundred books a day.



Wayne County Charging System

The Wayne County Charging System, sometimes called Color Charging, is a variation of the loan or transaction number charging method. It was developed by Walter H. Kaiser in the Wayne County Public Library, Detroit, Michigan, during 1948 and 1949. It was installed in the branches in July, 1949. Although based on the same principles which govern other systems using sorting machine equipment and photographic charging, it differs from them in several respects. No mechanical devices are needed, and the essential materials are simple and relatively inexpensive. Other differences include the use of a charge slip which may be used for up to four book charges and colored decks of loan or transaction cards for the identification of overdue books. The basic features of the system are the use of a loan or transaction number to identify a given patron with a given book by assigning identical numbers to each and the fact that books are due on one specific day in a week. These features are essentially true of other transaction card systems, such as the photographic, but in the Wayne County Charging System no machine is used.

Equipment used

1. Loan or transaction cards,¹ which serve as date due cards. A punched card (Figure 15), usually a McBee Keysort card, is generally used. A standard 3" x 5" date due card may

¹The term "loan card" will be used rather than "transaction card." Loan cards are sometimes called L cards.

LOAN NUMBER 1242

KEEP THIS CARD
IN THIS POCKET

C44047

BOOK IS DUE ON LAST DATE STAMPED

DATE DUE	DATE DUE
MAY 3 1 1951	
JUL 26 1 1951	
SEP 20 1951	
NOV 15 1951	
L. ... C 1952	

WAYNE COUNTY LIBRARY
Branch No. 1

Figure 15. Punched loan card, Wayne County Charging System. The punches on the left side of the card indicate the loan number; those on the right the color of the card; and those at the bottom the branch number or symbol. The date due is stamped on the face of the card.

be used, but it is not recommended. It has been found that the punched McBee Keysort cards not only speed up the sorting process but also eliminate the too frequent and unnecessary interfiling of the punched cards by color and by number as books are returned. These loan cards are used in eight serially numbered decks, each deck having a different colored edge. With each colored deck representing one week's charges, eight decks will cover eight weeks. If books are not returned promptly, more decks can be used. However, this has not been found to be necessary. The number of loan cards needed is determined by the highest weekly circulation figure.

2. Charge slips, sometimes called C slips. One side of the

Copy from Book Pocket

AUTHOR	COPY	LEAVE BLANK
Hell	4	47
TITLE		
New name		

AUTHOR	COPY	
Reilly	5	48
TITLE		
Staircase		

AUTHOR	COPY	
Knight	3	49
TITLE		
Dying echo		

AUTHOR	COPY	
Gordon	1	50
TITLE		
Dead level		

FILL IN OTHER SIDE

Figure 16. Charge slip, Wayne County Charging System, showing spaces for the name of the author, title, and copy number of all books to be withdrawn. The loan number (in this case 47) is placed by the desk assistant at the top right hand corner.

slip (Figure 16) has space for entering the author and title of up to four books; the reverse allows for the writing in of the borrower's name and address. The loan number is placed in the upper right-hand corner of the first charge space only.

- 3. Consecutive numbering machine, self-inking, for stamping the transaction numbers on the Keysort cards.
- 4. Unnumbered punched cards or a card of a designated color numbered in pencil for temporary replacements of missing cards in any deck. These are eventually replaced with colored duplicates of the original card.
- 5. Small trays for loan cards, designating 7-day and 14-day loan periods.

6. Small hand punch and sorting needle for the McBee Keysort cards.
7. Small trays for charge slips to be placed on the tables in the library.
8. Fine record slips.
9. Book pockets (low type) giving the author, title, and copy number of each book. The key word of the title, the author's name, and copy numbers are underlined to indicate what is to be written on the charge slip by the borrower.
10. Circulation statistical sheets.
11. Overdue postal cards.

Loan period

In the Wayne County Charging System books are due on only one day in the week, whether the loan period is for one, two, or three weeks. A day in which a low circulation is apt to occur is usually selected as the due date. This date, stamped on the loan cards, will be two weeks and six days later than the date on which the deck is first used. For example, if the regular due date selected is Friday, the loan card in a book circulated on Monday, June 11, will be dated June 29. Books may be returned on any day before the end of the loan period. When the deck of loan cards has been used for the full week, a deck of loan cards bearing the new date and banded with a different color is put into use.

Charging routines

1. Charge slip is filled in by the patron, giving the author, title and copy number of each book. One slip is used for as many as four titles. By underlining the key words of the title as it appears on the book pocket, the amount of writing done by the library patron is appreciably reduced.
2. When a book is brought to the circulation desk, the charge slip is inspected by the assistant for accuracy.
3. Predated and prenumbered color-banded loan card is placed in each book pocket. Color used is determined by the week.
4. Loan number for the first book withdrawn is copied on the charge slip (Figure 16). The others will follow in sequence. This completes the charging process.
5. Charge slip is placed face down in a container, preserving the numerical order and providing an automatic count and filing of the circulation.

Discharging routines

1. When a book is returned to the circulation desk the loan card is removed from the book pocket. Since a different

color band is used each week, the color of the loan card will indicate whether a book is overdue. If the book is overdue, the fine is computed and collected. If the fine is not paid, a record of the author and title of the book, the name and address of the borrower, and the amount of the fine is made and placed with the delinquency record. Book is now ready to be shelved, unless a reserve has been placed on it.

2. Loan card is placed in the desk tray for returned cards and held for sorting.
3. Returned loan cards are sorted by colors.
4. All charge slips used for a week are kept with completed deck until overdue notices are sent. A slip indicating due date is placed in front of the pack of charge slips.
5. When a book is returned without a loan card a record is made of the author and title of the book and the name of the person borrowing it. Due date is secured if possible. Date when the book is returned is stamped on the record, which is put with the returned loan cards. These records are checked before sending out the overdues.

Renewals

1. If the book is brought to the library the renewal is treated as a new charge.
2. If the renewal is made without the book a record is made of the loan number, the color of the card, and the due date. This record is placed with the charge slips for the date the book was due. The borrower is informed of the new due date and notes it on the loan card. The record of the renewal is transferred to the new date with the patron's original charge slip after the book becomes overdue. All renewal charges without loan cards are added to the circulation count.

Overdues

1. Deck of loan cards for given date are arranged in numerical sequence by means of a sorting needle (see Figure 11).
2. Notes for missing numbers are made manually by checking through the deck of loan cards.
3. Charge slips for corresponding numbers are removed from the file.
4. As loan cards are returned, they are inserted in the proper place in the deck.
5. Charge slip for books overdue or lost can be clipped to the registration card and filed with the delinquency record.

6. Book can be referred to on the overdue postal by the loan number and date due rather than by writing the author and the title of the book.

Reserves

1. Visible index can be used for large reserve list.
2. Any distinguishing card or sticker can be placed in pocket of books for continuing or frequent reserves.
3. Shelves should be checked each day with the reserve list.

Circulation statistics

Circulation is counted weekly by circulation week rather than by calendar week if they are different.

1. Loan number on the first charge slip is subtracted from the number on the last charge slip and one is added. One-week and miscellaneous charges and renewals are added to determine the number of books circulated for a given week.
2. Number of one-week charges is the difference between the last number used from the current one-week charge deck and the last number used in the same deck of the previous week for two-week charges.
3. When the first day and last day of the month, or both, fall on a day other than the regular due date, that week is split in the circulation report. Record of the circulation on the last day of the month is made.
4. The circulation for the first week of the new month is determined by subtracting the number recorded on the last day of the previous month from the total week's circulation.

Special routines devised by libraries

General

1. To help in writing charge slips, patrons are instructed to use shortened title of the book (which can be underlined on the catalog card).
2. It is possible to combine this system in branches with photographic charging in a central building. For best results, however, loan number charging should be used throughout the system.
3. Use of small notebook for record of renewals is helpful in a small library.
4. Loan cards can be predated.
5. If one out of three books is returned, a check placed over the loan number indicates that only two books need to be found.

Seven-day books

1. Loan cards from the deck in the previous week can be used for charging 7-day books.
2. Separate charge slips can be used for issuing 7-day books. These are filed with the 14-day charges of the previous week.

Magazines

1. If magazines are circulated for one week and have pockets, they are treated as 7-day books.
2. Loan card may be clipped to the magazine; however, no loan card need be used.

Pamphlets

1. Charge slip is filled in by patron in the same manner as for books.
2. Pamphlets are placed in a large manila envelope containing a book pocket.
3. Loan card is placed in a pocket or clipped to an envelope or to the individual pamphlet.

Interlibrary loans

1. Interlibrary loan slip is used as the charge slip.
2. Instead of a loan card a scratch card marked "interloan" and the due date are used to flag a book and inform the patron when it is due.
3. Interlibrary loan slips are filed back of the charge slips until the end of the loan week, when they are filed with the other circulating interlibrary loans.
4. When the book is returned, the interlibrary loan slip is dated with the date the book was returned. The slips can be kept in a permanent file if desired.

Advantages

1. The system is simple and economical to operate. No machines which might fail are necessary, and the handling of routines involves only two records: charge slips and transaction cards. These are inexpensive.
2. Charging and discharging procedures are speedy and accurate. Withdrawing the loan card is more rapid than searching for a book card in the circulation file and the books are ready to be shelved as soon as this card has been removed from the book pocket. Mechanical filing of punched cards is faster than hand sorting by author and title or by a long call number.
3. Some library operations and supplies connected with the

manual charging systems are eliminated, such as book cards, slipping of books, and the filing and counting of book cards for circulation statistics.

4. Registration process simplified or eliminated. A numerical registration file is not needed. Under these circumstances a permanent alphabetical registration file is sufficient and would include a central delinquency record. Thus reregistration is needed only when a juvenile borrower changes to an adult card or a borrower changes her name. Some libraries do not even require the registration of borrowers, thus eliminating a borrower's card.
5. Overdues are simply handled. The necessary information is quickly found on the charge slip which includes the number corresponding to that on the missing loan card.
6. Snags are rare because, without book cards and with only a loan card and charge slip, the discharging process is simple and easily accomplished. There seems to be less chance for error under these circumstances.
7. One due date a week simplifies all record keeping and overdue routines.
8. Elimination of the possibility of lost or transferred borrower's cards.
9. Borrower's slips can be used for a complete and permanent record of all books withdrawn if the library wishes to keep them.
10. Counting daily circulation is easy, since the first and last numbered loan cards used on a given day plus the renewals indicate the number of books withdrawn.
11. Circulation desk is neat and free from the clutter of unslipped books.
12. Professional and clerical duties are clearly separated with the result that the public receives better service.
13. Only a few assistants are needed at the circulation desk.
14. The system is flexible enough to be used throughout a large library system.
15. Borrower's signature on the charge slip proves that he has withdrawn the book.
16. Eyestrain and mental fatigue kept at a minimum. The simple procedures used are less tiring than writing a number and checking or stamping cards.
17. Charge slips available for analysis of any kind. These slips give all the data formerly available on a borrower's card.

Disadvantages

1. Handling of reserves is not completely satisfactory. Although a visible file or dummy system has proved helpful in many libraries, much depends on the memory of the desk assistant.
2. Location of a specific book in the circulation file is difficult.
3. Circulation statistics for non-fiction, fiction, or juvenile books as separate groups are not available unless a device such as making a mark on a paper for each title of each type withdrawn is used. This procedure would complicate the charging routines.
4. Writing the borrower's name and address on many charge slips is a long process if the library permits an unlimited number of books to be borrowed. However, if only the key words of the title are used, this is actually not a problem.
5. Names of borrowers might be forged if the borrower's card is eliminated or the proper identification is not demanded by the librarian.
6. Borrower has no record of books taken or withdrawn.
7. There is no method for proving that a book has not been returned.
8. Library patron performs part of the charging process. In some communities, this does not present a problem.
9. The taking of inventory is difficult. Books can be inventoried only when they are in the library as no cards for books out on loan are available.
10. Illegibility of patron's handwriting could result from borrower performing part of charging process. This can be watched by the desk assistant and corrected at the time of the charge.
11. Change of address is not always recorded since no borrower's identification card is presented at the time a book is withdrawn. Patrons do not always give this information voluntarily.

The Wayne County Charging System follows other transaction card methods closely, but is simpler and less costly to install because machines are not an essential part of the equipment used. For this reason it can be used in all libraries of all sizes, ranging from the small community branch to a large public library.

Double Record Charging System

For many years, college and university libraries have used a two card charging system — one card filed by the classification number and the second by the date due. Sometimes a third record, a card for each borrower, is added; but it is the double record charging system which is most often found in college and university libraries and thus forms the point of departure in the consideration of other circulation methods.

Equipment used

1. Book cards, bearing call number, author, and short title for each non-fiction book to be circulated and author and title for each fiction book. Two cards are made for each book when the call slip is not used for a record or when two cards and a call slip are used for three records.
2. Book pockets giving the call number, author, and short title for each non-fiction book and author and title for each fiction book circulated. Some libraries omit the author and title for non-fiction, giving only the call number.
3. Call slips including space for the call number, author, and title of the book and for the borrower's name and address.
4. Date due cards or date due slips.
5. Fine record slips.
6. Pencil, date stamp, and ink pad.
7. Guide cards for date due and classification number file in the circulation tray.

8. Circulation statistical sheets.
9. Overdue postal cards.

Charging routines

College and university libraries may have either open or closed stacks. In open stack libraries a call slip is made out by the borrower only when he wishes to reserve a book; in closed stack libraries a call slip is made out for all books requested. The charging routines vary only in this one particular.

1. For closed stacks, a call slip is made out by the borrower for the book requested. This slip is sent to the stacks. For open stacks this step is omitted.
2. When book comes to the circulation desk the book card is signed by the borrower. If two book cards are used, the second card, which is sometimes of a different color, is signed by the student at this point.
3. Date due card is inserted in the book pocket or the date slip is stamped with the due date. This completes the charging process.
4. Book cards are dated by the desk assistant.
5. One card for books charged to the student is filed by the classification number in the loan file, the other card or call slip by the date due. Some libraries require only one card to be made out by the borrower; the second record is made out on a scratch slip by the desk assistant. A third file by borrower's name may be kept.
6. Cards for faculty loans are filed under the name of the borrower.

Discharging routines

1. When a book is returned to the circulation desk, the book cards and slip are pulled from the files. If the book is overdue, the fine is computed and collected. If the fine is not paid, a slip record is made of the title of the book, the author, the name and address of the borrower, and the amount. This record is placed in a file set aside for the purpose.
2. Date due card, if used, is removed from the book pocket.
3. Book cards are replaced in the pocket of the book. Book is ready to be shelved unless the card indicates that it is to be held for a reserve.

Renewals

If the book has been brought to the library, the date slip or date due card is restamped. If the book is not brought in, the cards are removed from the classification and date due files and restamped.

Overdues

1. Cards or slips for books due on a given day are pulled from the date due file.
2. Using these cards as a guide, duplicate cards are pulled from the classification file and overdue notices are written from them.
3. The date on which the overdue notice was sent is entered on the cards.
4. Cards and slips are refiled in their respective files.

Reserves¹

Book card bearing the name and address of the borrower can be marked with a symbol, such as H (for hold) or R (for recall). Notices are usually sent for the latter, whereas the former will be found when overdue notices are sent. When books are returned, they are placed on a designated shelf.

Special charges

1. The charges for books in special collections, sent to the bindery, or temporarily withdrawn for departmental use are placed in the classification file.
2. Permanent departmental charges may be indicated by some symbol or abbreviation in the card catalog.

Circulation statistics

Amount of daily circulation is recorded on statistical sheets by the number of fiction and, for non-fiction, by the number of books circulated in each classification number.

Advantages

1. Location of all books easily ascertained. Records show what books are not on the shelves, to whom they are charged, and the dates on which they are due. The third record, if kept, shows which books are charged to each borrower.
2. There is a permanent record of the number and type of books circulated to each borrower.
3. All copies of a book to be reserved can be located at all times.
4. Several assistants can carry on the circulation routines at the same time.
5. Weeding and inventory procedures are simply executed because the book card indicates the number of times a volume has been circulated and is available even when the book is not in the library.
6. Studies of readers' interests possible from the book cards.

¹The word "reserve" is used for material recalled for individual use. It is not used in the sense of "reserved books" for a class.

Disadvantages

1. Routines slow, time consuming, and cumbersome. It is necessary for the borrower to write his name on two cards which are then dated and filed by the assistant in two files. In addition, a date due slip and one book card are stamped. There are at least 27 places in the circulation tray to look for a given book: the classification file and each day's circulation (an average of 26 places). Manual sorting, filing, and counting of loan records, the typing of book cards, and the slipping of books by means of two cards are necessary.
2. Percentage of error said to be high. Probably the reason for this is that during rush hours student assistants must make two records for each book, and that cards must be filed in two files.
3. Overcrowded circulation tray, with two separate files.
4. Disorderly circulation desk, particularly during rush hours, resulting from unslipped books.
5. Two book cards, pocket, and a date due slip are used, making four required pieces for each book. These cards must be made for books which are circulated only occasionally.
6. Date due slips pasted in books give them a messy appearance.

Obviously the Double Record Charging System is a slow and cumbersome process, but it was used in college and university libraries many years before librarians realized that other procedures could be adopted for circulation routines. The importance of knowing at all times where a given book is, whether it is on the shelves or in circulation, in order to give this information to faculty members, has made college librarians reluctant to experiment with other methods for charging out books.

Tab Charging Systems

Among the first single record charging methods used in college and university libraries was the visible tab system. These tabs consist either of a specially designed call card to represent the date or of the application of scotch tape, signal tabs, or colored inks to the call cards or book cards. The basic principle under which all of these methods work is that the position of the tab indicates the date the book is due.

DATE TABS

One of the first libraries to use the Date Tab Charging System was the Woman's College of the University of North Carolina. In this system date tabs are applied to call cards.

Equipment used

1. White 3" x 5" call cards (heavy stock) with a date tab extending a quarter of an inch above the top (Figure 17). These tabs are numbered 1-31 or 1-12, corresponding to the days of the month or the consecutive numbers of the months, and fall into six positions across the three-inch top of the card. Each card, which can be of colored stock to indicate the different months or different types of charges, usually has space for the call number, author, and title of the book, borrower's name and address, and brief directions for filling out the card.
2. Fine record slips.
3. Date slips.
4. Date stamp and ink pad.

5. Guide cards for the circulation file arranged by classification numbers.
6. Circulation statistical sheets.
7. Overdue notices.

Charging routines

1. Call card used for the particular day is filled out by the borrower (i.e. card for book issued on November 10, due November 24, would be numbered 24 if daily cards are used; if monthly cards are used, this card would be numbered 11). Card is brought to the circulation desk.
2. Call card is sent to the stacks.
3. Book or report on the book is brought to the desk by a page.
4. Information on the call card is checked with the book by the desk assistant.
5. Date due is stamped on the date slip in the book and on the top of the call card at the right side. This completes the charging process. Stamping of the call cards can be done later, during slack periods, if necessary. Call card is placed in the day's file in a designated spot in the circulation desk.
6. Call cards are sorted into piles according to loan periods and special charges.
7. Call cards are filed by classification number.
8. Circulation is counted for statistical purposes.
9. Cards for day's circulation are filed by classification number in the circulation tray.

Tabbing procedure

Starting on the left side of the call card, position 1 would be for books due on the 1st, 7th, 13th, 19th, 25th, and 31st days of the month, position 2 for books due on the 2nd, 8th, 14th, 20th, and 26th, and so on through the month. Libraries having a monthly loan period use cards numbered 1-12 to correspond to the month the books are due rather than the day. Overdues then are sent twice a month instead of daily.

Discharging routines

1. When a book is returned to the circulation desk the call card is removed from the classification file and placed in the book. If the book is overdue, the fine is computed and collected. If the fine is not paid at this time, a record is made on a special slip which is placed in a borrower's file, and also entered on the back of the call card.
2. Call number on the book and on the call card is verified. Call card is destroyed and the book is sent to the stacks,

12	
329 P765	DEC 10 1954 CALL No. is group of numbers and let- ters in upper left corner of catalog card.
Author <u>Pollock, James K.</u> Title <u>Party campaign</u> <u>funds</u> Name <u>James Street</u> Address <u>Abbot Hall</u> XIII-393	

Figure 17. Date tab card, Tab Charging System, showing the date tab extending above the card.

unless it is to be held for a special purpose, such as a reserve.

3. Cards for books charged and returned on the same day can be identified by the date tab and added to the day's circulation count.

Renewals

Since renewals are treated as new charges, books are usually brought to the library for renewal. The following procedure is then followed:

1. A second call card for the new date is filled out by the borrower, who presents it at the circulation desk with the book.
2. Call number is verified by the assistant.

3. New due date is stamped on the date slip in the book and on the call card.
4. Letter "R" is written after the date on the date slip in the book and on the call card.
5. First call card is withdrawn from the file and destroyed.
6. Second call card is filed in the day's circulation.

Books not returned to the library can be renewed as follows:

1. A second call card for the new date is filled out by the borrower.
2. New due date is stamped on the call card and the letter "R" written on this card.
3. First call card is withdrawn from the file and destroyed.
4. Second call card is filed in the day's circulation.

Overdues

1. Call cards with the proper date tab for books overdue on a particular day are removed from the circulation file.
2. Student and faculty charges are separated.
3. Overdue notices are sent for student charges.
4. Fines for books found to be overdue at this point can be recorded on the back of the call card and on a slip to be placed in a borrower's file. This is the same procedure which was followed when the book was returned and the fine not paid.
5. Call cards are refiled in the circulation tray.

Reserves, faculty loans and other special charges

Records for reserves, bindery, carrels, or other special location charges are made on 3" x 5" cards without tabs and placed in the regular two-week file. Being without tabs, these cards will fall below the date tab cards and therefore cannot become confused with the regular call cards.

Faculty loans can be treated in the same manner as student loans or placed on a colored card in a designated position (e.g. 12) with the tab left blank. Date of issue must be stamped below the tab. If faculty loans are made in the same way as student loans, a duplicate record on a 3" x 5" card is made for all overdues and placed in a file arranged by classification number. The original call card is placed in a special file of faculty loans arranged alphabetically by name of borrower.

Undated cards with tabs in a designated position can be used for student loans falling due on one certain day, such as at the end of the semester. Cards with undated tabs also allow for other types of charges.

Circulation statistics

Amount of daily circulation is recorded on statistical sheets by the number of fiction books and, for non-fiction, by the number of books circulated in each classification number.

Advantages

1. Circulation routines performed with speed, accuracy and efficiency. One card is used to give both the book and date due record, thus providing a single file in which to look for this information. Borrower's record has been placed in a secondary position. A reader's file can be added if it is deemed essential.
2. Savings effected in records, time and supplies. Book cards and pockets are not necessary. One call card is the only essential record. The clerical routines involved are easy and simple.
3. Provision is made for the circulation of pamphlets, periodicals, and uncataloged material. These can be recorded on the same tabbed card as is used for books.

Disadvantages

1. Call cards with tabs are more expensive than those without, and can be used only once, since they are actually call slips.
2. Said to be less flexible in its adaptation to varying loan periods and reader categories than other systems.
3. Illegibility of borrower's handwriting could cause confusion. Careful checking of the call card is necessary in order to avoid inaccuracies.

INKED TABS

Procedures for the Inked Tab Charging System, or "circulation by technicolor" as it is sometimes called, were worked out by the University of Pennsylvania Library in 1947. The Boston University Library at one time made an adaptation of the system through the use of nail polish, either combined with green ink or used alone. Both ink and nail polish are applied to call cards.

Equipment used

1. Call cards. One side of these cards has space for the usual information (call number, author and title of the book, and name, address, and status of the borrower (Figure 18). The reverse side includes the report on the book requested.
2. Colored ink or nail polish.
3. Fine record slips.
4. Rubber-tipped moistener or small brush.
5. Blotter.

6. Date due slips.
7. Guide cards for circulation file, which is arranged by classification number.
8. Date stamp and ink pad.
9. Circulation statistical sheets.
10. Overdue notices.

Charging routines

1. Call card for book to be withdrawn is made out by the borrower.
2. Call card is sent to the stacks.
3. Book or report on the book is brought to the desk by a page.
4. Call card is checked with the book by the desk assistant.
5. Date due is stamped on the call card and on the date due slip in the book. Stamps can be self-inking in colors to represent the length of the loan and special charges (e.g., black for reading room use, red for one-week charges, blue for 14-day books, green for loans to faculty and graduate students). This completes the charging procedure.
6. Call card is placed in the day's circulation file.
7. Call cards are sorted into piles according to the loan periods and special charges.
8. If ink is used for tabbing, each pile of cards is blocked square on end and spread out by a shifting motion of the opposing thumb and fingers leaving 1/6"-1/8" margin showing at the top of each card. Cards are then placed flat on a blotter and exposed margins are swabbed in a predetermined position with ink of the designated color.
9. If nail polish is used for tabbing, the tops of the cards are painted in specified positions.
10. Circulation is counted and the call cards are filed by classification number in the circulation tray.

Tabbing procedures

1. The color and position of the tab on the card is determined from a schedule drawn up in advance, following a regular pattern. The top, bottom, and two sides of the card can be colored with four positions on each, or 16 positions in all. Thirteen of these are used with four colors of ink (red, blue, green, and brown) to indicate date due. For instance, red, blue, green, and brown ink are used in position 1 for books due or withdrawn on September 30 and October 4, 7, and 11 respectively (Figure 18); the colors are repeated in position 2 for books charged out on October 14, 18, 21 and 25. This arrangement allows for 52 dates before it is necessary to change the colors and positions. If books are

8	CALL NUMBER
SEP 30 1954	822
	519 R
Author <u>Shakespeare</u>	
Brief title <u>King Henry the</u>	
<u>Fifth</u>	
Full Name <u>Julia Henderson</u>	
Address <u>1209 S 2nd St.</u>	
<u>Phila 12</u>	
School and class or University status <u>Junior CW</u>	
Expecting degree this semester? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
UNIVERSITY of PENNSYLVANIA LIBRARY	
For Books For Outside Use	

Figure 18. Inked call card, Tab Charging System. This call card provides space for the call number of the book to be withdrawn, the author and title, and the borrower's name and college status. The black spot on the upper left hand corner (red on the original card) indicates that this book was due or withdrawn on September 30, or October 4, 7, or 11.

due on only two days of each week, the system extends over a period of 26 weeks before it repeats itself. Expansions and contractions can be made to conform to vacation or graduation dates. The three extra positions left on the card can be used for faculty charges (color changed annually), carrel or departmental charges (colors changed semi-annually), and specially controlled books.

2. If two colors of nail polish or nail polish and green ink are used, these are alternated across the top of the card in six or seven equal positions to show the date due. Positions on

the sides of the cards can indicate reserves, missing books, and faculty or other special charges.

Special cards already printed with the various colored inks to indicate the different positions have been suggested for possible use. A chart showing date due with the color and its correct positions so indicated is helpful for all tabbing procedures.

Discharging routines

1. When a book is returned to the circulation desk it is discharged in the usual manner by pulling the call card, which had been filed by classification number, from the circulation file. If the book is overdue, the fine is computed and collected. If the fine is not paid at this time, a record is made on a special slip which is placed in a borrower's file. It is also entered on the back of the call card.
2. Call number on the book and on the call card is verified. Call card is usually destroyed. The book is ready to be shelved unless it is being held for a special purpose, such as a reserve.

Renewals

1. If the book to be renewed is brought to the library, it is treated as a new charge.
2. If the book is not brought to the library, the call number, author and title, date due, and borrower's name are given to the desk assistant. The new due date is inked in the correct color and position on the call card. Colors in this progression around the card do not interfere with each other unless the book has been renewed many times over a long period. A narrow strip of white gummed paper can be folded over the end to obliterate the colors in all positions. It is also possible to cover one colored ink with another or to cut out the ink spots on the card, which can then be reinked and redated; or the word "no" can be written below the incorrect color to invalidate it.

Overdues

1. Overdue notices are sent semiweekly if books are due only on two days a week (usually Wednesdays and Saturdays for books due on Mondays and Thursdays) or every other day for books due daily.
2. In packs of about 100 the cards are thumbled by the assistant who looks for a particular color in a particular position. These cards represent books which are overdue.
3. Overdue notices for these books are written.

4. Call card is recolored with the correct ink in the next position, in order to be sorted out for a second overdue notice.
5. Cards are refiled in the circulation tray.
6. Second and third notices are sent in the same manner.
Record of all notices and transactions can be kept on the call card.

Reserves

1. If a reserve is placed for a book which is not due, the second call card can be stapled to the original one. If it is a one-month charge, the original card is recolored in order for it to be sorted out sooner than it otherwise would be.
2. If a reserve is placed for a book which is due or overdue, it can be recalled immediately. The second call card is stapled to the original and recolored in order for it to be sorted out when overdues are written, or sooner if necessary.

Circulation statistics

Daily circulation is recorded on statistical sheets by the number of fiction books and, for non-fiction, by the number of books circulated in each classification number.

Advantages

1. Circulation routines performed with speed, accuracy, and efficiency. One card is used to give the book and date due record, thus providing a single file in which to look for this information. Borrower's record has been placed in a secondary position. A reader's file can be added if it is deemed essential.
2. Savings effected in records, time, and supplies. Book cards and pockets are not necessary. One call card is the only essential record. The clerical routines involved are easy and simple.
3. Inexpensive to install and operate. Few new supplies or equipment are necessary. It is true that specially printed call cards and an inking device are essential to operate this system, but on the whole the cost is slight.
4. Reports indicate that the system is flexible and effective in operation. Provision can be made on the tabbed card for the circulation of pamphlets, periodicals, and uncataloged material.

Disadvantages

1. Careful checking of call cards is necessary in order to avoid inaccuracies. Illegibility of borrower's handwriting could cause confusion.
2. Watchful attention has to be paid when the inking process

is performed, so that the ink does not run beyond the designated spot. Quick blotting of the cards and use of a good card stock will counteract this.

3. Coding errors caused by using the wrong colored ink must be corrected by reinking. This can lead to mistakes in the sorting-out process.
4. If nail polish is used, it is necessary to place it accurately in order to see it on the card because it is placed only on the top edge and not on the front of the card.
5. No provision is made for any type of borrower's record. Therefore at the end of an academic year it is necessary to check each card in the circulation tray for books charged to members of the graduating class. The University of Pennsylvania has worked out a procedure to avoid this lengthy process.¹ The edges of the verso of the call cards, belonging to books charged out to graduating students, are colored with ink with a breakdown by schools on one side and by alphabet on the other side. A predetermined code is worked out for this routine. One argument against this procedure is that the work is done on cards for books which never become overdue; however, it need be done only for the last six weeks of a term.

SIGNAL TABS

One of the first installations of the Signal Tab Charging System was made at Trinity College Library in Washington, D. C., in 1941. Tabs are applied to book cards. Other college and university libraries have used the method since 1941, but have varied the type of signal tabs.

Equipment used

1. Book card which gives call number, accession number (if needed), author, and title of the book.
2. Visible colored signal tabs: metal, steel, plastic. These are available either plain, printed with dates, or printed with the names of the days of the week.
3. Fine record slips.
4. Date due slips.
5. Guide cards for the circulation file arranged by classification number.
6. Book pockets giving the call number, author, and short title for each non-fiction book and author and title for each fiction book circulated. Some libraries omit the author and title for non-fiction, giving only the call number.

¹Letter from Walter W. Wright, Assistant Librarian, Service Division, University of Pennsylvania Library, March 30, 1953.

7. Date stamp and ink pad.
8. Circulation statistical sheets.
9. Overdue notices.

Charging routines

1. Book is brought to the circulation desk by the page for closed stacks and by the borrower for open stacks. Book card is signed by the student with his name and campus address if required.
2. Book card is stamped with the date due by the desk assistant.
3. Date due slip in the back of the book is stamped. A piece of paper stamped with the date due and placed in the pocket of the book can be substituted for the pasted-in date due slip. This completes the charging process.
4. Book cards are arranged by classification number.
5. Circulation statistics are counted.
6. Metal or plastic clip of correct color is attached to the top of the book card in the designated location to indicate the date the book is due.
7. Book card with the colored clip attached is filed by classification number in the circulation file.

Tabbing routines

1. For a two-week loan period, with books due each day, the following method can be used: colored signal tabs (two or four) are placed in one of the predetermined positions on the top of the book card to indicate the date due. If two colors are used, a tab on the left side of the card shows charges for the first week and one on the right charges for the second week in a two-week period. Four sets of colors used in rotation avoid the possibility of two sets of the same color being left in the circulation file if sending of overdue notices is delayed. If notices are sent daily this precaution is not necessary. Signal tabs can be changed twice a week if overdues are sent semi-weekly. The use of a light and dark tab of the same color can indicate respectively the first three and last four days of any given week. Tabs of six or seven different colors can be used to represent days of the week.²
2. For a two-week loan period with books due one day a week, tabs of three colors are usually used to indicate the first, second, or third due period in a month. In a once-a-week due period, books taken out on Saturday are due two weeks from the following Friday, 20 days from the date of issue.

²In use at Northwestern University Library, Evanston, Illinois.

In both the daily and once-a-week due period, tabs of other colors are used to indicate overdues, reserves, and special charges. A calendar, with the dates marked with the proper color to be used, is helpful at the circulation desk.

Discharging routines

1. When a book is returned to the circulation desk the book card is removed from the circulation file. If it is overdue, the fine is computed and collected. If the fine is not paid, a record is made of the author and title of the book, the name and address of the borrower, and the amount of the fine. This record is attached to the book card which is placed in a fine record file.
2. Charge may be crossed or stamped out.
3. Signal tab is removed from the book card.
4. Card is replaced in the book, which is ready to be shelved unless it has been reserved.

Renewals

If the book is brought to the library for renewal, the book card is pulled from the circulation file and treated as a new charge. If the book is not brought to the library, the following method is used:

1. Special mimeographed renewal slip is filled out by the borrower, giving his name, the call number of the book to be renewed, and the date due.
2. Renewal slip is placed in the daily circulation file.
3. When the circulation is counted, the original book card for the book to be renewed is compared with the renewal slip and the correct colored tab for the next due date is attached to the card.

Overdues

1. Overdue books are identified by the color of the signal tab.
2. After notices have been sent, a tab of a color which has not been used in the tabbing for date due is placed on the card, either at the top or on the left or right side. Two and three tabs of a designated color indicate second and third notices.
3. Book cards are refiled in the proper place in the circulation tray.
4. Records for fines not paid can be clipped to the appropriate card in a borrower's file.

Reserves and other special charges

Additional colored signal tabs attached to book cards can indicate reserves, interlibrary loans, and charges to graduate students, faculty, or special departments.

Circulation statistics

Amount of daily circulation is recorded on statistical sheets by the number of fiction books and, for non-fiction, by the number of books circulated in each classification number.

Advantages

1. Circulation routines performed with speed, accuracy, and efficiency. One card is used to give the book and date due information, thus providing a single file in which to look for this information. Borrower's record has been placed in a secondary position. A reader's file can be added if it is deemed essential.
2. Savings effected in records, time, and supplies. Only one book card, on which is recorded the date due information, is used. Clerical routines involved are easy and simple.
3. The system is inexpensive to install and economical to operate. The only special equipment or supply necessary is the signal device. This is placed on the book cards already in use.
4. Conversion from double record system easily accomplished since book cards are used.
5. It is possible to tabulate various types of information from unlimited combinations of colors and sizes of signal tabs.
6. Tab is easy to fasten to and remove from the cards.
7. Cumulative errors in filing avoided since the charge file is necessarily small and misfiling in it can be detected easily.

Disadvantages

1. Signal tabs may work loose and fall off or catch on adjoining cards. Librarians have reported that plastic tabs hold tighter than metal ones.
2. Reference to the circulation file said to be a cumbersome process since cards with signal tabs attached are apt to be awkward to handle.
3. As in any system using book cards, the slipping of books is necessary.
4. Circulation desk can become crowded with many unslipped books, especially during the rush hours.

SCOTCH TAPE TABS

The use of scotch tape tabs on book cards for use in a one-card charging system was first worked out by William Patterson Reid when he was Associate Circulation Librarian at the University of Michigan General Library in 1942.³

³H. A. Tollefson, *A Charging System for College and University Libraries*, n.d., p. 2.

Equipment used

1. Book cards bearing call number, author, and short title for each non-fiction book to be circulated and author and title for each fiction book.
2. Roll of 1/2-inch scotch tape.
3. Scotch tape dispenser.
4. Fine record slips.
5. Date due cards or slips.
6. Book pockets giving the call number, author, and short title for each non-fiction book and author and title for each fiction book circulated.
7. Razor blade mounted on a metal handle helpful but not necessary.
8. Red ink, if sides of scotch tape are inked before use. Inking makes the tabs on a book card more visible. Colored scotch tape, which is more easily seen in a circulation tray, can be used, but may obscure the necessary records on the book cards. However, it does not smear the cards with gum and can be used to indicate different types of charges.
9. Guide cards for the circulation file (arranged by classification number).
10. Circulation statistical sheets.
11. Overdue notices.

Charging routines

1. Book is brought to the circulation desk by the page for closed stacks and by the borrower for open stacks. Book card is signed by the student with his name and address.
2. Book card is stamped with the date due and placed in a designated spot in the circulation file by the desk assistant.
3. Date due slip or card is placed in the pocket of the book. This completes the charging procedure.
4. Book cards are arranged by classification number.
5. Scotch tape tabs from the previous charges are removed.
6. Circulation statistics are recorded.
7. Scotch tape tab placed on each book card in a predetermined position to indicate the date due. The edges of the book card can be printed with the tabbing positions if desired.
8. Book cards are filed by classification number in the charge tray.

Tabbing routines

Using a tape dispenser, a piece of tape approximately 1/2 inch in length is torn off the roll and folded over the top edge of the book card, with the tape projecting about 1/4 inch above the edge. The tape must be squeezed together so that it will stand upright. If the tab projects less than 1/4 inch, it is hard to see

TABLE I

Tabbing positions for 14-day, 7-day, and 1-day books over a 3 week period,
Scotch Tape Tab Charging System

Type of Book	Monday First Week	Thursday First Week	Monday Second Week	Thursday Second Week	Monday Third Week	Thursday Third Week
14-day Book	6	1	2	3	4	5
7-day Book	4	5	6	1	2	3
1-day Book	2	3	4	5	6	1

Source: Material for Tables I-IV has been taken from H. A. Tollefson, *A Charging System for College and University Libraries*, n.d., p.6-12.

in the circulation file; if it is too long, it may fold over the card.

The position in which each day's tab is to be placed is determined by a tabbing guide, which is arranged by date and the length of time a book is to circulate.

There are two loan periods in each week, Monday through Wednesday and Thursday through Saturday. If the library is open on Sunday for circulation, the first period can run from Sunday through Wednesday. During the first part of the week, that is from Monday through Wednesday, cards for 7-day books will be tabbed two positions preceding the 14-day position, and cards for 1-day books will be tabbed two positions preceding the 7-day position. For instance, when cards for 14-day books are being tabbed in position 6, those for 7-day books will be tabbed in position 4 and for 1-day books in position 2. In the Thursday through Saturday period of the same week the tabbing moves forward one position in clockwise rotation but still keeps the interval of two positions between 14-day, 7-day, and 1-day loan periods. Table I shows how these routines are arranged. Six positions, with two positions for different loan periods, are used each week in order to prevent overlapping of tabs and to make certain that when the overdues are pulled from the circulation file the cards for 14-day, 7-day and 1-day overdues can be withdrawn at the same time.

TABLE II

Tabbing guide for 14-day, 7-day, and 1-day books,
Scotch Tape Tab Charging System

	2	3	4	5	
1	Tabbing Guide For Normal Circulation Periods				6
Books Drawn On			14 day	7 day	1 day
Mon.-Wed., Oct. 5-7			6	4	2
Thurs.-Sat., Oct. 8-10			1	5	3
Mon.-Wed., Oct. 12-14			2	6	4
Thurs.-Sat., Oct. 15-17			3	1	5
Mon.-Wed., Oct. 19-21			4	2	6
Thurs.-Sat., Oct. 22-24			5	3	1
Mon.-Wed., Oct. 26-28			6	4	2
Thurs.-Sat., Oct. 29-31			1	5	3
Mon.-Wed., Nov. 2-4			2	6	4
Thurs.-Sat., Nov. 5-7			3	1	5
Mon.-Wed., Nov. 9-11			4	2	6

Table II shows positions of tabs for books charged 1, 7, and 14 days over a period of five weeks. From this table it can be seen that on October 5-7, 14-day books are tabbed in position 6; on October 12-14, one week later, 14-day books are tabbed in position 2, 7-day books in position 6, and 1-day books in position 4. On October 23, when the overdues would be pulled, all cards in position 6 would be overdue. This would include all 14-day, 7-day, and 1-day charges in that position. On the following Monday to Wednesday period, October 26-28, cards for 14-day books could be tabbed again in position 6 without any overlapping.

TABLE III

Tabbing guide for books due at the end of a term,
Scotch Tape Tab Charging System

	2	3	4	5	
1	Tabbing Guide for Books Due at the End of a Term				6
Books Drawn On		14 day	7 day	1 day	
Mon.-Wed., May 11-13		6	4	2	
Thurs.-Sat., May 14-16		1	5	3	
Mon.-Wed., May 18-20		2	6	4	
Thurs.-Sat., May 21-23		2	1	5	
Mon.-Wed., May 25-27		2	2	6	
Thurs.-Sat., May 28-30		2	2	1	
Mon.-Wed., June 1-3		2	2	2	
All student charges are due on June 3, 1953					

Tabbing procedures for special charges, such as books due at the end of a term or before and after a closed period, differ somewhat from those for normal periods. Table III shows how books due at the end of a term are tabbed. Since these books would be due on a certain date, all books charged out from two weeks before that date to the final due date are tabbed in the same position. In Table III it is seen, for example, that from Monday, May 18, to Wednesday, June 3, all cards for 14-day books are tabbed in position 2. From Monday, May 25, to Wednesday, June 3, both 14-day and 7-day books are also tabbed

TABLE IV

Tabbing guide for books charged
out before and after a closed period,
Scotch Tape Tab Charging System

	2	3	4	5	
1	Guide for Tabbing Before and After a Closed Period				6
Books Drawn On		14 day	7 day	1 day	
Mon.-Wed., June 8-10		6	4	2	
Thurs.-Sat., June 11-13		1	5	3	
Mon.-Wed., June 15-17		1	6	4	
Thurs.-Sat., June 18-20		1	1	5	
Mon.-Wed., June 22-24		2	1	6	
Thurs.-Sat., June 25-27		3	1	1	
Mon.-Wed., July 6-8		6	4	2	
Thurs.-Sat., July 9-11		1	5	3	
Mon.-Wed., July 13-15		2	6	4	
Thurs.-Sat., July 16-18		3	1	5	
Mon.-Wed., July 20-22		4	2	6	
Library closed June 29-July 4, 1953					

in position 2; and from Monday, June 1, to Wednesday, June 3, cards for all books, regardless of the length of the loan period, are tabbed in position 2. On Tuesday, June 2, all cards tabbed in position 1 will be pulled and on Wednesday, June 4, all cards in position 2.

For books charged out just before a closed period of from three days to two weeks, the tabbing position used will be for the date on which the library is to be reopened. In Table IV it is assumed that the library is closed from June 29 to July 4 and reopens on July 6. The tabbing positions for books withdrawn

from June 11 through 13 were 1, 5, and 3. Fourteen-day books taken out during this period would be due June 25-27 and pulled as overdues on June 30. Since the library will be closed on that day, the books will be due on July 6 and therefore should be tabbed in position 1. Likewise, 14-day books charged out June 15-17 and June 18-20 as well as 7-day books withdrawn June 18-20 would be tabbed in the first position. But 14-day books drawn out June 22-24 would not be due until the library reopened and therefore would be tabbed in position 2. On the other hand, 7-day books charged out June 18-28, would be due on July 6 and the cards would be tabbed in position 1. Finally, cards for 14-day books withdrawn June 25-27 would be tabbed in position 3 and 7-day and 1-day books in position 1.

On the first charge period after the library reopens, July 6-8, cards for 14-day books are tabbed in position 6, which is the third position from the last 14-day position used for books before the library was closed. Positions that could have been used are omitted. Cards for 7-day and 1-day books are tabbed in the usual places, positions 4 and 2. From then on, the tabbing and pulling of overdues continues in the normal order.

Cards for books issued to the faculty are tabbed in the usual manner and are separated from the student charges.

Discharging routines

1. When a book is returned to the circulation desk, the book card is taken from the circulation file. If it is overdue, the fine is computed and collected. If the fine is not paid, a record is made on a special slip and attached to the book card which is placed in a fine record file.
2. Book is ready to be shelved unless it has been reserved.

Renewals

If the book is brought to the library for renewal, the book card is pulled from the circulation file. The scotch tape tab from the previous due date is removed from the card and a tab for the new date is applied to the card in the usual manner. Card then is refiled in the circulation tray. If the book is not brought to the library for renewal, the following method may be used:

1. Special mimeographed renewal slip is filled out by the borrower, giving the author's name, the call number of the book, and the date it is due.
2. Renewal slip is placed in the daily circulation file.
3. When the circulation is counted, the original book card is found in the circulation file and compared with the renewal slip. The scotch tape tab from the previous due date is

removed from the card and the tab for the new due date is applied to the card in the usual manner. Card then is filed in the circulation tray.

Overdues

1. The tabbing position on a card for which a book is overdue is determined by counting back five positions from the current tabbing position of 14-day books. For example, on a given Tuesday 14-day books will be tabbed in position 6. The fifth position back would be 1. Therefore, all cards tabbed in the first position will be for books which are overdue.
2. Scotch tape tabs are cut from the cards.
3. Overdue notices are written. This is usually done twice a week, on Tuesdays and Fridays.
4. Colored metal clips can be placed on cards to indicate that an overdue notice has been sent. Different colors are used to indicate the two dates on which overdue notices are written.
5. Second notices are sent for cards bearing a clip of the proper color. Various colored clips may be used for second and third overdue notices.
6. Cards are returned to the circulation file.
7. If fine records are used, the clips are removed from the book cards, which are stamped "See Fine Record" and filed in the circulation tray.

Circulation statistics

Amount of daily circulation is recorded on statistical sheets by the number of fiction books and, for non-fiction, by the number of books circulated in each classification number.

Reserves and other special charges

Reserves for books in circulation

Book card is tabbed in the position used for the date the book was issued. Record of the reserve is clipped to the book card in the circulation file. This book card will then be pulled with the other cards for books due on that date, if it is not returned before.

Faculty charges

Two methods have been used for faculty charges:

1. Book cards can remain untabbed for charges to faculty. A duplicate record on slips or cards of all such charges is dated with the date of issue. These records may be kept in a special file by the name of the faculty member.
2. Two additional positions, below position 1 and 6, can be added to the book cards to indicate faculty charges. Blue

and red scotch tape can also be used for tabbing — blue for charges during the first half of the first quarter and red for the second half. During each period, faculty overdues can be pulled, notices sent, and the book cards retabbed for the current three-month period.

Month charges

Cards for books being circulated for one month can be tabbed in the same position as for two-week charges. They can be retabbed for a second two weeks when the overdue cards are pulled.

Advantages

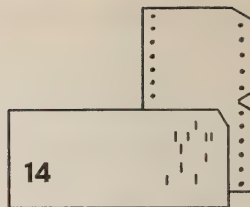
1. Circulation routines performed with speed, accuracy and efficiency. One card is used to give the book and date due record, thus providing a single file in which to look for this information. Borrower's record has been placed in a secondary position. A reader's file can be added if it is deemed essential.
2. System is inexpensive to install and maintain and simple to operate. Regular book cards are used, hence no new supplies are necessary. Clerical routines are simple and easy.
3. Tabs can be placed on a book card faster than a second record, which was needed in the double record system, can be written and filed.
4. Conversion from a double record system easily accomplished since book cards are used.
5. General principles of the system are adaptable to various situations. For instance, material circulated for one day, such as pamphlets, can be fitted into the system. Scotch tape tabbed cards can be combined with the Gaylord charging machine by cutting off the tabs when the books are checked in.⁴ Book cards can be retyped when they become too thick to fit into the Gaylord machine.

Disadvantages

1. As in any system using book cards, the slipping of books is necessary.
2. Adding and removing scotch tape to cards is apt to be a messy job unless the assistant has been trained to handle scotch tape in an advantageous manner.
3. Circulation desk can become crowded with many unslipped books, especially during the rush hours.

⁴Used at Western Michigan College Library at Kalamazoo.

With the use of tab charging systems, adaptable to both large and small circulations, college and university libraries were able to reduce the cost of charging procedures both in supplies and staff time without using expensive machines. In college libraries it is necessary to be able to locate books at all times, even when they are in circulation. This is difficult or impossible with some of the newer equipment and procedures used by public libraries. The tab charging system, by reducing the book and date due information to a single file, has made it possible to install and maintain an efficient and simple system.



Punched Card Charging Systems

In order to understand punched card charging systems adequately it must be remembered that there are two types of cards: those punched on the face of the card and those punched around the edges. The former method was patented by Herman Hollerith in the 1880's and first used by him for governmental statistical purposes. In the early years of this century Powers developed a similarly punched card, the only difference being the manner in which the holes were punched. The Hollerith or IBM cards and machines are manufactured by the International Business Machines Company and the Powers cards and machines by Remington Rand.

In contrast to this type is the marginal punched card patented in 1925 by Alfred Perkins, of England, and later developed by Donald A. Nevin into the familiar card of today. Although marginal punched cards are sold by a number of companies, the Keysort card of the McBee Company of Canton, Ohio, is the one in general use in charging systems.

The first known adaptation of punched cards to circulation procedures was made by Ralph H. Parker in 1936 at the University of Texas Library, where he used Hollerith or IBM cards.¹ In 1939 Frederick G. Kilgour adapted the McBee Keysort punched card equipment to charging procedures at Harvard College.²

¹Ralph H. Parker, "The Punched Card Method in Circulation Work," *Library Journal*, LXI (December 1, 1936), 903-05.

²Frederick G. Kilgour, "A New Punched Card for Circulation Records," *Library Journal*, LXIV (February 15, 1939), 131-33.

Since that time many installations of IBM and Keysort punched card charging systems have been made in college and university libraries.

Punched cards are used in charging systems as transaction cards, call cards, and book cards. The first use can be adapted to both public and college library routines. Although the routines used for punched transaction cards in college libraries are practically the same as for public libraries (see Chapters 7-11), they are described below so that college librarians contemplating the use of this system can see how punched cards are used in charging procedures as a whole. Punched cards used as call cards and book cards have proved to be a satisfactory way for college and university libraries to reduce the triple and double records formerly used in circulation routines to a single-entry system.

TRANSACTION CARDS

Equipment used

1. Call cards with space for classification number, volume or date (if necessary), author and title of the book, name and address of the borrower, and any other information needed in the library.
2. Prenumbered and predated transaction cards.³
3. IBM Time Stamping Machine.
4. Serially numbered deck of master cards.
5. Book pockets giving the call number, author, and short title for each non-fiction book and author and title for each fiction book circulated. Some libraries omit the author and title for non-fiction, giving only the call number.
6. IBM Alphabetic Duplicating Key Punch.
7. IBM Horizontal Sorter.
8. IBM Collator.
9. Box for date cards.
10. Fine record slips.
11. Guide cards for filing circulation by date.
12. Circulation statistical sheets.
13. Overdue postal cards or notification slips.

Charging routines

1. Time stamping machine is turned back to 00000 when a new deck of transaction date due cards is used.
2. Call card giving call number, author, and title of the book, name and address of the borrower, and other desired information is filled out and handed to the desk assistant.
3. Call card usually is checked with the special charges in the circulation tray before it is sent to the stacks.

³Equipment and routines for use with IBM cards is described since no record was found of the use of other punched cards in college libraries.

4. Book or report on the book is brought to the desk by the page.
5. If book is found, the call card is inserted in the time stamping machine which automatically stamps the transaction number, year, month, day, and time on the upper part of the card.
6. Call card is placed face down or behind other cards in the charging tray in order to keep the numerical sequence.
7. Pre-punched, prenumbered and predated transaction card is placed in the pocket of the book. This completes the charging process.
8. At the end of each day call cards are placed behind a guide card in the circulation tray.

Discharging routines

1. When a book is returned to the circulation desk the transaction card is removed from the book pocket and placed in a holding file in the desk. If the book is overdue, the fine is computed and collected. If the fine is not paid at this time, a slip record is made of the author and title of the book and the date returned. This record is filed in a designated spot in the circulation tray. The book is ready to be shelved unless it has been reserved.
2. Transaction cards are sorted each morning by the month and day in the sorter.
3. Cards representing books not yet due are placed in a file of the circulation tray by month and day.

Renewals

1. If the book is brought to the library for renewal, it is treated as a new charge.
2. If the book is not brought to the library, a special slip giving the call number, previous due date, transaction number, and new due date can be made and attached to the call card.

Overdues

The loan period under this system is usually two weeks.

1. Returned transaction date due cards are arranged in the card sorting machine by the transaction number. This deck represents returned books.
2. Transaction cards are automatically compared with a complete master deck of numbered cards by means of the collator. Each card for which there is no matched card will be sorted out. The call cards bearing the same transaction numbers as these unmatched master cards represent the overdue books for the day. All the other call cards are

destroyed. Overdue postal cards or notification slips are sent for overdue books.

3. Call cards are checked against the slips for books for which fines were not paid, appropriate call card is removed from the file, and the name of the borrower is written along the edge of the card. These cards are filed by name of the borrower and a notice is sent to him.

Reserves

A visible record, described under the Photographic Charging System (Chapter 7), may be used for handling reserves. Another method is to use a special card with a space for the call number of the book desired, the date wanted, and the name of the person wishing it. These cards are filed by call number and the file is placed near the shelves on which books are placed for shelving.

Special routines devised by libraries

1. If a transaction card is missing from a returned book a special form giving space for the call number of the book, date returned, remarks, and initial of desk assistant is made out by the assistant. These are filed by call number and compared with the overdue file.
2. Service charge is made for overdue books when the fine is not paid at the time of return.
3. Renewals for faculty members are made by withholding overdue notices until the fifth week after the books are taken. Faculty loans are usually for four weeks under this system.

Circulation statistics

Statistics for daily circulation are obtained by subtracting the transaction number on the first call card from that on the last plus one. To this figure is added the number of renewals.

Advantages

1. Circulation routines performed with speed, accuracy, and efficiency. One card is used for both book and date due information, thus reducing all records to a single entry. Overdues are quickly and easily handled by means of a sorting device. Filing of errors is not cumulative, since all the charges are sorted from the file the day after they become overdue. Confusion and rush at the circulation desk are reduced to a minimum, thus allowing the borrower to be taken care of more quickly.
2. Savings effected in records and supplies. Only one card is used in the charging procedure. Records are kept in a single file.

3. Less manual labor required of the desk assistants, since the sorting and filing are done mechanically.
4. Circulation count simplified.
5. Fewer assistants needed at the circulation desk.
6. Circulation desk neat and free from the clutter of unslipped books.
7. Punched call cards, being of a heavier stock, easier to handle than thin call slips.
8. Businesslike method for circulation procedures.
9. Provision for multiple sorting features, such as by borrower's identification number, amount of fines, faculty loans, and special charges.

Disadvantages

1. The reserve system is not completely satisfactory. However, the routine described has proved adequate at the Brooklyn College Library where it is used.
2. Location of a specific book in the circulation file is difficult.
3. Borrower has no record of the books he has taken out or returned.
4. There is no method for proving that a book has not been returned.
5. Taking of inventory is difficult.
6. Circulation statistics by classification number are not available.
7. Illegibility of call cards written by borrowers is possible.
8. Book pocket for IBM call cards is a different size than the standard pocket.
9. Rental charges for the machines are high.

Variation

Notched transaction cards have been used for overnight loans and one week reserves by the University of Toronto Library.⁴ Six colored decks of serially numbered marginal punched cards, each deck numbered consecutively from 1 to 650 but coded differently, are used as transaction cards. Each color represents one day of the week (blue for Monday, red for Tuesday, etc.). A second series of three decks, each numbered from 1 to 1000, can be used during a busy period. In the charging procedure, the number of the first transaction card is written on the first call slip. This serially numbered transaction card is removed and placed in a special file. The cards in this special file are then sorted by the serial number and the missing numbers represent the overdue books.

⁴Mary L. Newton and R. H. Blackburn, "A Punched-Card Charging System," *Canadian Library Association Bulletin*, VI (September 1949), 40-42.

The University of Toronto Library has a unique device for detecting missing transaction cards. The left margin of the card is punched in black ink. The cards are notched along this unperforated edge in such a manner as to expose, by means of the jogs in the otherwise solid black line, any missing numbers.

CALL CARDS

Equipment used

1. Call cards are of two kinds:

- a. IBM Punched Call Card,⁵ 3.25" x 7.375". Code numbers are printed on the face of the card. Space for whatever information is needed by the library is included, such as author and title of the book, student's name, address, and number, call number of the book, type of borrower, type of loan, location, date borrowed and returned (Figure 19). These cards may be purchased in colors or with a colored stripe on one side or down the center of the card.
- b. McBee Keysort Punched Call Card, available in most practical sizes from 3" x 5" to 3 1/4" x 6" (Figure 20). Single or double rows of holes are placed around either three or four sides of the card. The card can be imprinted with whatever information is necessary for the library, such as author, title, and call number of the book; name, address, identification number, and college status of the borrower; and date due.

2. Punch

- a. For IBM cards: IBM Alphabetic Duplicating Key Punch (Type 031).
- b. For McBee Keysort cards: McBee Handslotting Punch, or Foot Groover for punching several holes at once.

3. Sorting device

- a. For IBM cards: IBM Horizontal Sorter (Type 082).
- b. For McBee Keysort cards: sorting needle or "tumbler." A 12-inch No. 2 steel knitting needle can be used for the same purpose. The McBee Company also has a Selective Sorter, a machine which holds two or more needles and can select one or more classifications from a group of marginal punched cards.

4. Alignment block for use in needle sorting process for McBee Keysort cards.

5. "Card savers" or correction slips for covering up errors in renotching McBee Keysort cards.

⁵Remington Rand punched cards and equipment are not used at present in any punched call card charging system to the author's knowledge.

CALL NUMBER 029.6 P684a		UNIVERSITY OF FLORIDA LIBRARIES		11041333 B		2		5101	
AUTHOR Pitkin, Walter B.		TITLE The art of useful writing		TYPE BORROWER 1 STUDENT 2 FACULTY 3 STAFF 4 UNREGISTERED 5 LIBRARY DEPT 6 DEPT. LIBRARY 7 INTER LIBRARY 8		DATE DUE NOV 4 1954		LOCATION 1 STACKS 2 SOCIAL SCIENCE R.R. 3 SCIENCE R.R. 4 HUMANITIES R.R. 5 UNIVERSITY COLLEGE 6 BUILDING	
COPV 1		STUDENT NUMBER 48625		STAFF NUMBER DO NOT SEND OR FOLD THIS CARD		TYPE LOAN 1 TWO WEEK 2 TERM 3 READING ROOM 4 ONE MONTH 5 PERIODICAL 6 PERMANENT 7 RENEWAL 8 CANCELL USE 9 LIMITED LOAN 10 ONE WEEK 11 NEWSPAPER 12 RECORDS		DATE BORROWED OCT 21 1954	
VOLUME 1		NAME John Dix		DATE OF PERIODICAL		CHECKED OUT BY		DATE RETURNED	
NUMBER 1		LOCAL MAILING ADDRESS 200 Clay Court Gainesville							

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80
IBM 755904

Figure 19. IBM Punched Call Card. This card has symbols on the upper right hand side which indicate due date, the number of overdue notices sent, the call number of the book, the student's number, and the type of loan. This same information is punched into the card as well.

6. Date due slips for books.
7. Fine record slips.
8. Guide cards for circulation file arranged by classification number.
9. Circulation statistical sheets.
10. Overdue notices.

Charging routines

1. Call card is made out by student — giving call number, author, and title of book, his name and address, and other desired information — and handed to the desk assistant.
2. Call card is sent to the stacks.
3. Book or a report on the book is brought to the desk by a page.
4. Date due is stamped by the desk assistant on the call card and on the date due slip in the book. This completes the charging process.
5. Call card is placed in a temporary daily file and sorted approximately by classification number.
6. Call cards are sorted according to the due date and special charges (one week, two weeks; faculty, graduate student; etc.). If books are to fall due each day, cards are sorted daily; otherwise, they are sorted as many times as books are due within one week.
7. Call cards are punched (IBM cards) or notched (McBee Keysort cards) for date due and special charges. Punching

CALL NUMBER:		DATE DUE:	
370.73		FEB 11 1955	
J22			
VOLUME:		COPY:	
2			
AUTHOR:		BLDG. USE <input type="checkbox"/>	
TITLE:			
Journal of teacher education			
BORROWER'S SIGNATURE:			
Harriet Smith			
ADDRESS:			
1200 W. Oregon			
IDENTIFICATION NO.:		COLLEGE STATUS	
46782		UNDERGRAD. STUD. <input type="checkbox"/>	
		GRAD. STUD. <input checked="" type="checkbox"/>	
		GRAD. STUD.-ASS'T <input type="checkbox"/>	
		FACULTY <input type="checkbox"/>	
		OTHER <input type="checkbox"/>	
UNIV. OF ILL. LIBRARY URBANA			
LOCATIONS		TENS	
1 2 3 4 5 6 7 8 9 0		1 2 3 4 5 6 7 8 9 0	

Figure 20. McBee Keysort Punched Call Card. This card, as shown, has space for punches on three sides. Those on the left are to indicate semester, carrel, faculty, and name of borrower; on the right side date due; and at the bottom the call number and location.

- for IBM cards is first done on a pattern card. Call cards are then placed in the magazine of the punching machine which duplicates the date due and other desired information on all cards. McBee Keysort cards are notched on each side according to a prearranged code for date due and special charges. (Example: books withdrawn on August 1 and due in one week are notched at A1; due in two weeks, A2; due in four weeks, B2.)
- Call cards are filed in the circulation tray by the classification number. This process is performed manually in many university libraries. One or two files can be maintained. Two files include one for active charges (those books which

are charged for outside use) and one for inactive charges (special charges, such as reading room, bindery, departments, carrels, etc.).

Discharging routines

1. When book is returned to the circulation desk the call card is removed from the file. If it is overdue, the fine is computed and collected. If the fine is not paid, a record is made on a special slip and attached to the call card, which is placed in a fine record file.
2. Call number on the book and card are verified.
3. Call card is destroyed or returned to the borrower. The book is ready to be shelved unless it has been reserved.

Renewals

If the book is brought to the library for renewal, it is treated as a new charge and the old card is destroyed. If the book is not brought to the library one of two methods is used.

Method No. 1

1. New call card is filled out as if for a new charge.
2. Old call card is withdrawn from the file and destroyed.
3. "Ren" is marked in upper right hand box on the new call card, which is filed in the day's circulation.

Method No. 2

1. Call card for the book to be renewed is taken from the charge file.
2. Book and call card are stamped with the new due date.
3. Call card is marked "Ren" and placed in a temporary daily file.
4. Call card is renotched for the new date due.
5. Card saver then is placed over the old coded hole or a duplicate or canceled card is stapled to the original call card in order to cover up the first notching. If the latter method is used, it is necessary that there be an unnotched hole on the second card in the position corresponding to the one which needs to be canceled. The call card is filed in the day's circulation.

Overdues

Overdues are usually written daily if books are due every day or three times a week on the days the books are due (such as Monday, Wednesday, Friday).

1. Entire circulation file is either needled in the position of the date due, in the case of Keysort cards, or run through an IBM sorting machine for the selection of cards for the

overdue date. A sorting machine is necessary for use with IBM cards and can be used with McBee Keysort cards as well. The needling process used with McBee Keysort cards is simple to operate (see Figure 11 and accompanying text). Directions for sorting out cards by means of a machine (IBM or McBee sorter) are given in the technical manuals obtained from the individual companies.

2. Overdue notices are sent for cards thus sorted out.
3. McBee Keysort call cards are renotched for date due one week hence. A card saver may be placed on McBee Keysort cards over the hole designating the old date or a used or duplicate card may be stapled to the original card. A second and third punch can usually be made without disturbing the first punch. Cards can thus be notched weekly for the advanced date so that they will fall out when the overdues are being sent. After first, second, and third notices have been sent, a special punch can be made so that all overdues fall out at once. Some libraries use a 3" x 5" slip on which the author and title of the book, borrower's name and address, and date due are recorded. This slip is filed in a special place for overdues and can become a personal file for late books.
4. IBM or McBee Keysort cards for overdue books are refiled in the charge tray.

Reserves

1. Call card or notice form is made out by the student for the book to be reserved.
2. Form can be stapled to the back of the original call card, or the name of the person from whom the book is being recalled can be penciled in on the original call card and a special mark placed on the card in a predetermined spot to draw attention to the card.
3. When the reserved book comes in, the old charge card is destroyed and the book is set aside for sending of the notice. If the call card has been made out it can be used for the new charge, if not, it is made out when the student calls for the reserved book.

Circulation statistics

Tabulated sheets, showing the number of books circulated on each day to students, faculty, carrels, for reading room use, etc. are generally used for recording circulation statistics. A record of code numbers can be put on this sheet also.

Special routines devised by libraries

For overdues

1. The process of needling McBee Keysort cards can be done by classification number on certain days in order to keep each amount to be needled more or less equal. For example, 400's, 500's, and 700's can be sorted on Mondays, 200's and 300's on Tuesdays, 800's on Thursdays, and 000's, 100's, 600's and 900's on Fridays. Other combinations can be worked out depending on the amount of circulation in each classification.
2. Borrower's identification number, if one is used, can be punched on the call card. The identification number can also be punched in the call card at the time of the loan but it has been found that a large proportion of all books loaned are returned before the due date.
3. If the word "Overdue" is stamped on the call card, the due date need not be renotched at the time the cards are sorted out.
4. A further check on returned overdue books may be made by placing the cards for all returned books in a receptacle as they are returned. At the end of each day the cards can be run through a sorter, if IBM equipment is used, which will select cards on which fines should be assessed.
5. Fines on overdue books can be recorded on IBM call cards by punching the amount into the card when the book is returned but the fine is not paid. The charge against each borrower can be mechanically tabulated.
6. One, two, or three colored clips can be placed on the call card to indicate the first, second, or third overdue notices, if the top of the card has not been perforated. This eliminates repairing the cards and sorting them for second and third notices. A small gummed flag which can be punched may be used in the same way as a sorting aid.
7. A red "X" can be placed on the card to indicate that the card needs additional handling.

For faculty loans

A direct code position on the marginal punched cards is generally used to indicate faculty loans. Some college libraries use an alphabetical arrangement of notching the surname of the faculty member, whereas others assign a special coded identification number for those withdrawing a large number of books at one time. These cards for faculty loans can be notched for date due as is done for student charges. When the card falls out in the sorting process, it can be refiled without renotching. When

it falls out a second time, the information can be entered on a personal card and placed in an inactive file. A record of all faculty loans is sometimes kept in a duplicate or inactive file at the front of the circulation file. Libraries using IBM equipment can sort out faculty charges at specific times.

For carrel charges

Special forms have been used for books charged to carrels. These forms consist of two parts, the second of which either is detachable or is a carbon copy. One slip remains in the book in the carrel and the other is placed in the charge file at the circulation desk. Call cards with a 1/2-inch colored stripe can be used to indicate carrel charges or a coded punch can be made in the card.

For reserve book room charges

Besides punching the call cards to indicate books assigned to the reserve book room, some university libraries use call cards with colored stripes printed across the top or down the center of the card. Other methods include the stamping of the words "Reserve Book Room" across the top of the call cards and the use of a special printed box at the bottom or back of the card to indicate a location charge.

For long term charges

Unpunched cards, special forms, or special coding for student identification numbers have been used to indicate long term charges. Some libraries use an arbitrarily assigned code number for charges to seniors so that the cards will fall out in the sorting process at a specified time, usually near the end of the semester. Still others use a personal record card similar to the one described under faculty loans for long term loans to graduate students.

For departmental charges

Records for departmental charges, which are not included on the catalog cards, can be placed in a public shelf list. This procedure helps to reduce the circulation file in libraries which have a large number of special charges.

Advantages

In general

1. Circulation routines are performed with speed, accuracy and efficiency. One card (a call card) is used to give the book and date due record, thus providing a single file in which to look for this information. Overdues are easily and quickly handled by means of sorting devices. Filing

errors are not cumulative, since all the charges are sorted from the file on the day after they become due. The confusion and rush sometimes encountered at a circulation desk, especially during busy hours, is reduced to the minimum, thus allowing the borrower to be taken care of more quickly.

2. Savings are effected in records and supplies. Only one card is used and the borrower's or student's file has been eliminated.
3. Conversion from other systems is fairly simple. If call cards had been used previously, the routines which the student follows are practically the same.
4. Records are simple and flexible. There is provision for multiple sorting, such as sorting by amount of fines, faculty loans, or special charges.
5. Less manual labor is required of the desk assistants, since the sorting and filing are performed mechanically.
6. Punched call cards, being of heavy stock, are easier to handle than thin call slips.

McBee Keysort cards and equipment

1. Maintenance costs are comparatively low as only reorders on cards are necessary.
2. Little equipment is necessary. It can all be purchased, thus eliminating rental costs. The necessary punches are relatively low in cost.
3. No specially trained personnel is necessary for operating the equipment.
4. Card stock does not need careful treatment. Creased or crumpled cards or those which have gone through pneumatic tubes can be sorted by needle. Grease spots, dampness, or soiled surfaces are said to have no effect on McBee Keysort cards.
5. Overdues are handled quickly, since they can be sorted out by means of the needle.
6. Work can be divided easily and distributed to many hands. It is also possible for each assistant to do more work and to do it faster.

IBM cards and equipment

1. There are endless possibilities for further simplification of charging routines by punching more information on the card and using additional equipment.
2. Special equipment useful for making research studies is available.

3. Punched cards are relatively low in cost.
4. Expense of machines can be shared by other departments of a university, as equipment can be used in routines other than in the circulation of library books.

Disadvantages

In general

1. As compared to paper call slips, punched cards are more expensive in the long run. The tops of the cards and those at the beginning of the circulation file become worn quite easily. In addition, many cards made out by the borrower actually never become charges.
2. Handwritten call numbers are often illegible.
3. System is slowed down when it becomes necessary to persuade the student to write call cards for several books collected from the stacks or on the open shelves.

McBee Keysort cards and equipment

The initial expenses are high, especially in large university libraries, where a great many call cards do not become circulation charges. McBee Keysort cards are fairly expensive compared to other types of punched cards. New filing boxes and slanting bases to aid in reading and filing cards at the end of the charging tray often are necessary.

IBM cards and equipment

1. Equipment is expensive. However, this expense can be shared by other departments of the university.
2. Trained personnel is required for the operation of the machines.
3. Cards must be handled carefully in order not to impair their usefulness. If they should become creased or crumpled, they can not be used in small-gauge pneumatic tubes.

Variation

An adaptation of the marginal punched call card system was made by Floyd Orton at the College of Liberal Arts Library at Boston University.⁶ In this charging method, call cards (3" x 5") are notched at the bottom according to a predetermined code to indicate date due and special charges. The left side of the card carries the numbers 1-7 for the date; the right side is lettered A-G for faculty loans, week of loan, bindery, departmental, or similar charges. There is also one small hole at the top on each card. In order to sort the cards a specially designed box,

⁶Floyd E. Orton, "Let's Look at Paper Work," *Library Journal*, LXXV (March 1, 1950), 368, 384.

7 inches long and 3 1/16 inches wide (inside dimensions) with 14 eighth-inch holes properly spaced across the bottom of the box at each end, was devised by Mr. Orton. Overdues are located by taking the call cards and placing them in batches in this sorting box. Two slender rods are placed in the proper holes at the bottom of the box for date due and special charges. The box is shaken so that the cards with the notched spaces will fall down on the rods. Those which are not notched in the designated space will stand above the rods. By running a third rod through the hole near the top of the box, the unnotched cards can be pulled out of the box. The cards remaining in the box represent overdue books.

BOOK CARDS

Punched cards can be used as book cards as well as transaction and call cards. They are used in the same manner as the conventional book card, but have the additional advantage that the date due and other necessary information is notched into the card. The McBee Keysort card is the only type of punched card used as a book card in this system. Ralph H. Parker in his book *Library Application of Punched Cards* discussed an IBM punched book card, but he reports that it is not in use in any library.⁷

Equipment used

1. Marginal punched book card (McBee Keysort). It is similar to the Keysort call card and can be notched in the same way for date due and special charges. There is space on the card for the author and title of the book, call number, and the borrower's name and address.
2. Hand-slotting punch or foot groover.
3. Sorting needle or selective sorter.
4. Book pockets giving the call number, author, and short title for each non-fiction book and author and title for each fiction book circulated. Some libraries omit the author and title for non-fiction, giving only the call number.
5. Card savers.
6. Date due cards.
7. Embossed identification card if used.
8. Fine record slips.
9. Guide cards for the circulation file which is arranged by classification number.
10. Statistical sheets for counting circulation.
11. Overdue notices.

⁷Letter from Ralph H. Parker, May 9, 1953.

Charging routines

1. Book card is signed by the student, giving name and address.
2. Book is brought to the desk.
3. Date due card is inserted in the pocket of the book. If an embossed identification plate is used, this information can be impressed on the book card. This completes the charging process.
4. Book card is placed in the day's file in the circulation desk.
5. Book cards are sorted mechanically or manually by classification number.
6. Date due and other desired information are notched into the cards. Previous notch may have to be closed up by means of a card saver before it is renotched, unless the new notch forms in the same place. If the card becomes too bulky from many stickers, these can be removed and one large card saver placed over the holes; or a new book card can be made.
7. Book cards are filed by classification number in the circulation file.

Discharging routines

When a book is returned to the circulation desk, the book card is taken from the circulation file and placed in the book pocket. If a fine is due, the amount is computed and collected. If the fine is not paid, a slip record is made of the author and title of the book, the name and address of the borrower and the amount. This record is kept in a file set aside for the purpose. The book is ready to be shelved unless it has been reserved.

Renewals

If the book is brought to the library for renewal it is treated as a new charge. If it is not brought in, the following procedure is followed:

1. Book card is pulled from the circulation file.
2. Word "Renewed" is stamped on the card, which is placed in the day's circulation.
3. Book card is repunched for the next due date. Card saver is placed over the old date.
4. Book card is refiled in the circulation tray.

Overdues

Cards for overdue books are sorted out daily or twice a week from the master file of loan records by means of a needle (see Figure 11 and explanatory text). Notices are sent for all cards sorted out in this manner. Cards are then repunched for next date to be sorted out later.

Reserves

1. Request card is filled in by the student or faculty member.
2. Signal tab is placed on all book cards of all copies of title to be reserved.

Circulation statistics

Statistics for the day's circulation are obtained by counting the cards by classification number. The totals are entered on special sheets.

Special and departmental charges

Space is provided on the McBee Keysort cards for notching special and departmental charges.

Advantages

1. Circulation routines are performed with speed, accuracy, and efficiency. One card (the book card) is used to give the book and date due record, thus providing a single file in which to look for this information. Overdues are easily and quickly handled by means of a sorting device. Filing errors are not cumulative since all the charges are sorted from the file on the day after they become due. The confusion and rush sometimes encountered at a circulation desk, especially during rush hours, is reduced to a minimum, thus allowing the borrower to be taken care of more quickly.
2. Savings are effected in records and supplies. Only one card is used, and the borrower's or student's file has been eliminated. Books already include pockets.
3. Conversion from other systems is fairly simple. Since both staff and patrons are already generally familiar with book cards, they are not required to learn how to make out new types of records. The borrower merely signs his name and address.
4. Records are simple and flexible. There is provision for multiple sorting, such as sorting by amount of fines, faculty loans, and special charges.
5. Less manual labor is required of the desk assistant, since the sorting and filing are performed mechanically.
6. The system meets the requirements of a library where a book card is necessary and eliminates the inherent inaccuracies associated with handwritten call numbers.

Disadvantages

The main disadvantage of the McBee Keysort book card is the necessity for using card savers, which make the cards cumbersome to handle. Not only does it take time to plug the old

holes, but the extra thickness of the card slows down the needling process. The book card has to be retyped if it contains too many card savers.

The use of punched cards in circulation procedures for college and university libraries is a method for reducing the number of circulation records to a single entry. It is somewhat revolutionary in the techniques used. The potentialities of punched cards are almost unlimited, since numerous items of information formerly recorded in separate files can be obtained through the use of various punches on the cards.

Both the Keysort and IBM charging systems have proved applicable to medium and large college and university circulations. It is fair to say, however, that the latter system is more acceptable to large libraries and should be seriously considered by them because the costly equipment necessary for carrying out the procedures can be utilized by other departments of the institution of which the library is a part.

Tab-Pocket Charging System

Book pockets containing book cards which are placed in the charging tray at the circulation desk were first used at Columbia College in 1941. Adapting the principles involved in marginal punched cards, Rutherford D. Rogers, Charles C. Williamson, and Frederick G. Kilgour used a book pocket which had been notched at the bottom to indicate date due and special charges.¹ After two years of use it was found that the homemade equipment which had been installed was not sturdy enough to facilitate the operation of the system.

Several years later Felix E. Snider, librarian of the Kent Library at Southeast Missouri State College, devised a Tab-Pocket Charging System² based on the Columbia College method of pocket charging and the tab charging procedures already described. Snider's system is described in this chapter.

Equipment used

1. Book pockets bearing call number, author, and short title for each non-fiction book to be circulated and author and title for each fiction book.
2. Tab-pockets, numbered 0-12. These pockets have a back piece with tabs which extend a quarter of an inch above the top in predetermined positions.

¹R. D. Rogers, "A Charging Pocket Solution for Overdues," *Library Journal*, LXXVI (December 15, 1941), 1072-74.

²This section is based on unpublished material sent to the author December 19, 1952, by Felix E. Snider, librarian, Kent Library, Southeast Missouri State College.

3. Book cards, with space for call number, author, and short title for each non-fiction book to be circulated and author and title for each fiction book as well as for name and address of borrower.
4. Date due slips.
5. Date stamp and ink pad.
6. Fine record slips.
7. Student's library record cards.
8. Guide cards for the circulation file, which is arranged by classification number.
9. Overdue notices.

Charging routines

1. Book card is signed by the borrower. Book is then brought to the circulation desk.
2. Date due is stamped on the book card and on the date due slip in the book by desk assistant.
3. Book card is dropped into a temporary file which is arranged by the loan period: overnight charges in one file, one-week charges in a second, and so on. This completes the charging process.
4. Record of the charge is entered on the student's library record card.
5. Book card is slipped into the proper tab-pocket, which is ascertained by referring to the prepared calendar of dates and corresponding pockets to be used with each date.
6. Book card in the tab-pocket is filed by classification number with the other charges for the day.
7. Circulation is totaled at the end of each day and entered in a record book.
8. Book cards in the tab-pockets are filed by classification number in the circulation tray.

Tabbing procedures

Each tab-pocket is numbered 0-12, thus allowing for the use of 13 positions to indicate date due and special charges. Numbers 1-11 are as follows:

- No. 1. Item due Monday, Tuesday, and Wednesday of 1st week.
- No. 2. Item due Thursday, Friday, and Saturday of 1st week.
- No. 3. Item due Monday, Tuesday, and Wednesday of 2nd week.
- No. 4. Item due Thursday, Friday, and Saturday of 2nd week.
- No. 5. Item due Monday, Tuesday, and Wednesday of 3rd week.

- No. 6. Item due Thursday, Friday, and Saturday of 3rd week.
- No. 7. Item due Monday, Tuesday, and Wednesday of 4th week.
- No. 8. Item due Thursday, Friday, and Saturday of 4th week.
- No. 9. Exhibits and displays in the library.
- No. 10. Workroom and bindery.
- No. 11. Faculty and other special long term charges.

Numbers 0 and 12 can be used for other special charges not listed in the above tabulation.

Discharging routines

1. When a book is returned to the circulation desk, the book card and tab-pocket are pulled from the circulation file. If the book is overdue, the fine is computed and collected. If the fine is not paid at this time, a record is made on a special slip and placed with the student's library record.
2. Book card is taken from the tab-pocket and placed in the pocket of the book. The book is now ready to be shelved unless it has been reserved.
3. Tab-pocket is dropped into a convenient bin. When a sufficient number have accumulated, they are taken to the assistant who separates them by tab number and places them in the supply slots of the desk.

Renewals

When the book is brought to the library for renewal it is treated as a new charge. If the book is not brought to the library the procedure is as follows:

1. Book card and tab-pocket are pulled from the circulation file. Fines are computed and collected when necessary or a record is made of them.
2. New date due is stamped on the book card and initialed by the assistant.
3. Book card is placed in the file with the other charges for the day.

Overdues

Notices for books that become overdue are sent out twice each week, on Mondays and Thursdays.

1. On Monday morning all tab-pockets bearing the number 2 for books that were due the previous Thursday, Friday, and Saturday are withdrawn from the circulation file. Overdue notices are sent for these books. At the same time that these are being sent, second notices are sent for tab-pockets

- bearing the number 1, which are for books due the previous Monday, Tuesday, and Wednesday; and third notices for those that remain from still earlier dates. Red stickers are placed on the latter for easy identification.
2. On Thursday morning all tab-pockets bearing the number 3 for books due the previous Monday, Tuesday, and Wednesday, are withdrawn from the circulation file. Overdue notices are sent for these books. At the same time second notices for books due on the previous Thursday, Friday, and Saturday (number 2) and third notices for those due on earlier dates are sent. Red stickers are placed on the latter for easy identification.
 3. Notices for the return of past-due overnight books can be sent out on the same three days as above.
 4. A small notation (1, 2, 3) can be placed on the book card opposite the student's name to indicate the number of overdue notices that have been sent.

Reserves

A small colored card with the name of the student reserving the book penciled on it is clipped (face out) to the back of the book card. When the book is returned a notice is sent for the reserve.

Circulation statistics

The book cards are counted for statistical purposes before they are inserted in the tab-pockets.

Special charges

1. Pamphlets, periodicals, and miscellaneous charges are handled the same as books except that a card is made for each item circulated. When the piece is returned, the information is crossed out so that the card can be used again. Each type of material usually has a different colored card and is filed separately.
2. Book cards for overnight charges are placed in a tab-pocket that would be used for other books falling due on the next day.
3. Cards for books borrowed for class use are placed in a temporary file and not put in tab-pockets.
4. Faculty charges are handled as other charges, using the number 11 tab-pocket.

Advantages

1. Uses single record file which shows where a given book is and when it is due. Book cards are filed by classification number; the tab-pockets indicate the date due.

2. Conversion from a system using book cards, date due slips, and book pockets is easy and economical.
3. Flexible system, since different loan periods can be adapted easily.
4. Permanent record of the number and type of books circulated.
5. All copies of a book to be reserved can be located at all times.
6. Weeding and inventory procedures can be simply executed.

Disadvantages

1. The thickness of the tab-pockets, each containing a book card, makes the charge file bulky.
2. Special pockets are expensive. No manufacturer has yet stocked the type of pocket used. Plastic pockets through which the information on the book card would be visible have been suggested but no guarantee of continued flexibility and transparency is possible.
3. Book cards must be sorted manually, a time-consuming process.
4. Inaccuracies apt to occur, especially in the manual filing of the book cards.
5. Disorderly circulation desk, especially during rush hours, can result from many unslipped books.
6. Date due slips pasted in the books give a messy appearance.

Pocket charging as it has been worked out at the Southeast Missouri State College is particularly adaptable to libraries having a fairly small circulation. The bulkiness of the tab-pockets in the circulation tray would prevent a large university library from installing this system.

Accession Number Charging System

An Accession Number Charging System was devised for the Lamont Library of Harvard College in 1949 for its undergraduate students. It is a simple numerical notation for the charging out of books.

Equipment used

1. Charge slips, (Figure 21) marked with five blocks at the top. There is also space for the author and title of the book and the name and address of the borrower. White and colored cards can be used to designate books from the general collection and for reserved books.
2. Date due cards, which are marked with five blocks at the top corresponding to the five blocks on the charge cards. White and colored cards can be used in the same manner as for the charge slips. Two spaces on each side of the card can be used.
3. Book pockets, which carry numbers called "circulation numbers." Numbers 1-29,999 are used for reserved books; numbers 30,000-99,999 for books in the general collection. This circulation number, which is actually an accession number, appears on the verso of the title page of each book and on the shelf list.
4. Guide cards for date due file.
5. Fine record slips.
6. Numerical record, on cards or on loose-leaf sheets, of authors and titles with the corresponding circulation numbers.

<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="width: 30px; height: 40px; text-align: center; vertical-align: middle;">1</td> <td style="width: 30px; height: 40px; text-align: center; vertical-align: middle;">5</td> <td style="width: 30px; height: 40px; text-align: center; vertical-align: middle;">4</td> <td style="width: 30px; height: 40px; text-align: center; vertical-align: middle;">6</td> <td style="width: 30px; height: 40px; text-align: center; vertical-align: middle;">2</td> </tr> </table> <p style="text-align: center; margin-top: 5px;">CIRCULATION NUMBER</p>	1	5	4	6	2
1	5	4	6	2	
<p>Author <u>Freud, Sigmund</u></p> <p>Title <u>Dreams</u></p>					
<p>Name <u>Elwood Smith</u></p> <p>Address <u>Wigglesworth Hall</u></p> <p style="text-align: center; margin-top: 20px;">Status</p> <p style="text-align: center;">Class — Officer — <u>Special</u></p>					
LAMONT LIBRARY					

Figure 21. Charge slip, Accession Number Charging System. The blocks at the top of the slip are for the insertion of the circulation number by the student. These correspond to the blocks indicated in the same manner on the date due card.

7. Circulation statistical sheets.
8. Overdue notices.

Charging routines

1. Charge slip is made out by the borrower for each book taken, giving the circulation number which appears on the book pocket (each figure in a separate block on the slip), author and title of the book, and borrower's name and address.
2. Book and charge slip are given to the desk assistant.
3. Charge slip is checked for accuracy by the assistant.
4. Circulation number is written on a predated date due card, each number in a separate block. This card is inserted in

the book pocket. This completes the charging process.

5. Charge slips are arranged first by date due and then by circulation number in the circulation file. Books are due on one day a week in this system.

Discharging routines

1. When a book is returned to the circulation desk the date due card is removed from the book, after checking to see if the number on the card agrees with that on the book. If the book is overdue, the fine is computed and collected. If the fine is not collected, a record is made and kept in a designated file. If the date due card has been lost, a note of the circulation number of the returned book is made on a separate slip. The book is ready to be shelved unless it has been reserved.
2. Circulation files are checked for the charge slip, using the date due card for the comparison. The charge slips are destroyed or kept for future records.

Renewals

When a book is brought to the library for renewal, it is treated as a new charge. If the book is not brought to the library, the following method is used:

1. Circulation number and date due are given to the assistant.
2. Charge card is found in the circulation tray and restamped with the new due date.
3. Charge card is placed in the day's circulation.

Overdues

Notices are written for all books in the file which have become overdue. Authors and titles of overdue books are ascertained by consulting the numerical record of authors, titles, and circulation numbers.

Reserves

Since the Lamont Library does not reserve books for any type of user, no procedures have been set up for this routine.

Circulation statistics

The amount of daily circulation is recorded on statistical sheets by the number of fiction titles and, for non-fiction, by the number of books circulated in each classification number.

Advantages

1. Circulation routines operated with speed, accuracy, and efficiency. One card is used to give both a book and date due record, thus providing a single file in which to look for this information. Clerical work is reduced to a minimum.

2. Savings effected in records and supplies. The charge slips and date due cards are inexpensive. Only one record is necessary for the operation of the system.
3. Books returned to the shelves quickly and efficiently.
4. Overdues handled quickly, since the charge slips are arranged by date due.
5. With a separate block for each figure, the charge slips and date due cards can be made legibly.
6. System adaptable for overnight reserve books.

Disadvantages

1. Numbers may be transposed by the borrower. The desk assistant should check the cards for any inaccuracies.
2. Charge slips must be sorted manually.
3. System is useful only in libraries which will never have more than 100,000 volumes. However, it has been suggested that a coded accession or "circulation" numbering system could be devised to keep the accession or "circulation" numbers from becoming too large.

Based on the general planning principle of removing all barriers between students and books, the Accession Number Charging System should give quick service and free access to the library shelves. It is primarily intended for use with fairly small circulations and would not usually be practical in large college libraries.

Colored Card Charging System

A simple charging system using colored cards as call cards has been developed at the Bowdoin College Library.

Equipment used

1. White and colored call cards with spaces for the borrower's name, address, and registration number (white for the faculty, salmon for students, blue for reserves, green for new books). These cards can be used four times (top and bottom on each side).
2. Special forms to be used in making out duplicate call card for the borrower's record file.
3. Date stamp and ink pad.
4. Date due slips.
5. Circulation statistical sheets.
6. Guide cards for circulation file arranged by classification number.
7. Fine record slips.
8. Overdue notices.

Charging routines

1. Call card of a designated color is made out by the borrower, giving his name and address and the author and title of the book. This card is given to the desk assistant who sends it to the stacks.
2. Book or report of the book is brought to the desk.
3. Date due is stamped on the call card and on the date slip in

the book by the desk assistant. This completes the charging process.

4. Duplicate of the call card is made out on a special form by the desk assistant and filed by call number under the borrower's name.
5. Call card is filed by classification number in the master circulation file.

Discharging routines

1. When a book is returned to the circulation desk it is checked for the due date. If it is overdue, the fine is computed and collected. If the fine is not paid, a slip giving the amount of the fine and the author and title of the book is made out and placed with the borrower's record.
2. Call card is pulled from the circulation file and a check made through it. The card can be reused if all the sides are not filled. Duplicate of the call card is removed from the borrower's file and canceled. The book is ready to be shelved unless it has been reserved.

Renewals

When a book is brought to the library for renewal, it is treated as a new charge. If the book is not brought in, the following method is used:

1. Due date is ascertained by the assistant.
2. Call cards are pulled from the circulation tray and stamped with the new due date.
3. Call cards are placed with the day's circulation.

Overdues

Books are due every day in this charging system and overdues are sent twice a week. Half of the file is checked for overdue books on Tuesdays and the other half on Thursdays. Information for the overdue notices is obtained from the call card.

Reserves

Name and address of the person wishing to reserve a certain title is written on a slip which is stamped with the date and clipped to the call card in the loan file.

Circulation statistics

Amount of daily circulation is recorded on statistical sheets by the number of fiction books, and, for non-fiction, by the number of books circulated in each classification number.

Advantages

1. Circulation routines are simple and can be performed with a fair amount of speed.

2. Savings are effected in supplies. Call cards and date due slips are inexpensive.
3. Types of loans are distinguished easily in the circulation file by the colors of the cards.

Disadvantages

1. Inaccuracies are apt to occur when a borrower makes out a call card. Careful checking on the part of the desk assistant is necessary.
2. Two records are kept.

The Colored Card Charging System is especially applicable to libraries with fairly small circulations. It is simple to operate and inexpensive to install.

Double Call Slip Charging System

New methods for charging out books continue to be devised by ingenious librarians. One of the most recent in the college and university library field is the double call slip system. Its chief characteristic is a slip which is divided into two parts, one becoming a charge card for the book and the other a date due slip or transaction number record. Based to some extent on the McBee Keysort punched call card charging system, the double call slip system was used first at the University of Missouri Library in 1951 under the direction of Ralph H. Parker, and later, with slight changes, by the St. Louis University Library. In 1952 the Circulation Department at the Columbia University Library developed the method further, but made considerable changes in the Missouri pattern. The system as it is used at the two Missouri institutions and at Columbia is described below.

MISSOURI METHOD

Necessary equipment

1. Call slips — with space for the title, author, and call number of the book, and the name and address of the borrower — specially designed with a perforated stub, which is torn off to form the second record. This stub may be at the left of the call slip as at the University of Missouri Library (Figure 22), or at the bottom as at St. Louis University Library. It has space for the call number, volume, and copy number of the book.

2. Centamatic Multiple Punch which has movable slugs that can be set to punch out designated numbers.
3. Metal rod or needle.
4. Flag-it stickers and round stickers to cover up the holes for the renewal routines.
5. Fine record slips.
6. Stamp and ink pad.
7. Guide cards for circulation file, which is arranged by classification number.
8. Circulation statistical sheets.
9. Overdue notices.

Optional equipment

1. Time clock for stamping call slips.
2. Date due slips.

Charging routines

1. Double call slip for book to be withdrawn is filled out completely by the borrower.
2. Information written by the borrower is checked by the desk assistant.
3. Call slip may be stamped in a time clock at this point if the time of the charge is necessary.
4. Call slip is sent to the stacks.
5. Copy number, accession number, year, or edition of the book is added to both parts of the call slip by the assistant when the book is brought to the desk from the stacks.
6. Perforated stub is torn from the call slip and placed with the date due slip in the pocket of the book. If date due slips are not used, the stub is stamped with the date due and placed in the book with the date due at the top. This completes the charging process.
7. Call slip is placed in the proper section of the charging tray for filing.
8. Call slips are punched in the following manner: the punch is set to stamp out each of the numbers on the line except one. The number not punched out is the code number for a given week, representing the date the book is due. Books are due on one day a week, usually Friday. For instance, all call slips for books withdrawn during the first week of a five-week cycle are punched so that numbers 0, 2, 3, 4, 5 are punched out leaving number 1 intact. Each week, the number left after the punching is done is advanced by one. The five-week cycle allows for a two-week loan period and three weeks overdue. Faculty loans which are separated from student loans are punched as follows: all numbers on

Do Not Remove		() Check if Faculty					JAN 14 1955
		5	4	3	2	1	
Call No. BL 625	Fill out completely and present at Loan Desk. Identification card must be shown.	Call No. BL 625	Author Alinsky				
Vol.		Vol.	Title John L. Lewis				
Copy 4		Copy 4					
		I. D. No. 1462	Signature John Smithers				
Form 15		Tel. No.	Columbia Address Main Street				

Figure 22. Call slip, Double Call Slip Charging System, Missouri method. The numbers along the top are punched out according to a prearranged schedule. The slip is perforated at the left so that this side can be torn off and placed in the book pocket with the date due slip.

call slips are stamped out and the slip is cut diagonally across the upper right corner.

9. Call slips are counted and stamped with the due date.
10. Statistics are entered on record sheets.
11. Call slips are filed in the circulation tray by the classification number.

Discharging routines

1. When a book is returned to the circulation desk, the date due slip and the stub end of the call slip are removed from the book pocket. The book is ready for shelving unless it has been reserved. If the book is overdue, the fine is computed and collected. If the fine is not paid, a record is made of the author and title of the book, the name and address of the borrower, and the amount of the fine. This is placed in a file set aside for this purpose.
2. Stub end of the call slip is matched against the call slip in the file.
3. The matching slip is removed from the file, thus indicating the return of the book and clearing the borrower's record.

Renewals

When the book is brought to the library, it is treated as a new charge if it is to be renewed. When the book is not brought to the library for renewal the following procedure is followed:

1. The call number is given to the desk assistant by the reader.
2. The call slip is pulled from the circulation file.

3. A sticker is placed over the hole indicating the original date due and the call slip is repunched for the new due date.
4. Call slip is placed in a temporary file of the day's charges.

Overdues

1. Metal rod or needle is run through the line of holes which correspond to the punched code for books due.
2. Call slips through which the rod will not pass are removed from the file. These slips represent overdue books. Notices are written for these.
3. For the second and third notices, the rod is run through the two cycles immediately preceding the one currently overdue. For instance, if cycle 3 is being pulled currently for the first overdue notice, the rod is run through cycle 2 for the second-notice books and cycle 1 for the third-notice books. Colored flag-it stickers can be attached to the top of overdue call slips over the number not punched out. These form a visible guide for follow-up notices. Overdue notices can be photostated from the call slips if desired.
4. If it is necessary to separate the faculty loans from the student loans, this can be done by running the rod through the number "0." The upper right-hand corner, having been clipped off, has left an open half-circle permitting these slips to drop off while all the others stay on the rod.

Reserves

A call slip is made out by the borrower wishing to reserve a certain title. These are filed separately by date of reserve and a flag-it sticker is placed on the original call slip of the wanted title. When the desired book is returned, the flag will indicate the reserve and the waiting list file can be checked.

Circulation statistics

The amount of daily circulation is recorded on statistical sheets by the number of fiction titles and, for non-fiction, by the number of books circulated in each classification number.

Advantages

1. Circulation routines performed with speed, accuracy and efficiency. One slip is used to give the book and date due information, thus providing a single file in which to look for this information. Confusion and rush at the circulation desk are reduced to a minimum, thus allowing the borrower to be taken care of more quickly. Overdues are handled easily and quickly by means of a sorting device. Filing errors are not cumulative since all the charges are sorted from the file on the day after they are due.

2. The system is simple and inexpensive to install. No machine is necessary and the supplies are not costly.
3. Less manual labor is required of the desk assistants since the sorting and filing are done mechanically.

Disadvantages

1. It is not possible to give a faculty borrower a list of the books charged to him.
2. Occasional difficulties arise from the failure of the desk assistant to record on the stub and call slip the copy numbers of the books withdrawn. This disadvantage can be eliminated by using prenumbered call slips with the same number on both the stub and the main portion.
3. Some faculty users may object to the amount of writing necessary, when withdrawing many books.
4. Careful checking of call slips is necessary to avoid inaccuracies.

COLUMBIA METHOD

Equipment used

1. Fold-over card consisting of two parts: a 3" x 5" charge card and a 3" x 3" carbon copy of part of charge card. The two parts are used as call slip and book card, and are attached by interleaved carbon. Figure 23 illustrates and describes the charge card. The carbon copy reproduces the call number, volume, date, copy number, author, and title. The reverse of the charge card and the carbon copy are used for a reserve record and for a report on the book if it is not on the shelf.
2. Wax or interleaved carbon.
3. Predated transaction cards (3" x 5"), usually of colored stock (Figure 24), including space for date charged, date due, and transaction number.
4. Bates numbering machine.
5. Book pockets giving the call number, author, and short title for each non-fiction book and author and title for each fiction book circulated.
6. Fine record slips.
7. Guide cards.
8. Colored signal tabs.
9. Circulation statistical record sheets.
10. Overdue notices.

Charging routine

1. Fold-over card for each book to be withdrawn is filled out by the borrower.

2. Charge card is checked by the desk assistant for completeness of the information.
3. Time of charge and flash board number are assigned at this point if this routine is used; however, it is not necessary for the working of the system.
4. Fold-over card is checked for the location of the book (stacks, bindery, department, etc.) by the desk assistant and a report is made on the reverse of the card.
5. If the book is in the stacks, the fold-over card is torn apart. Charge card is placed in the tray by call number and the carbon copy is sent to the stacks. If the book is out or is not available, a special mimeographed slip giving this information is stapled to the charge card, and the carbon copy is given to the reader.
6. When the book is delivered to the desk with the carbon copy in it, the charge card and the carbon copy are compared with the book.
7. Charge card is dropped in the circulation tray. Carbon copy is stamped with the transaction number by Bates numbering machine set in duplicate.
8. Same number is stamped on a predated transaction card which is placed in the book pocket. This completes the charging process.
9. Charge card is stamped in the upper right-hand section with the date due and filed by call number in a temporary file.
10. Carbon copy is dated in the same manner and placed in the master circulation file tray in order of transaction numbers behind the date due guide card, on which is recorded the range of transaction numbers used on that date. This file is kept at the desk where books are returned.
11. If the book has been charged out or cannot be located, the back of the charge card is filled out by the reader giving his name and address. It is then treated as a reserve or recall.

Discharging routines

1. When a book is returned to the circulation desk, it is checked for the date on which it is due. If the book is overdue, the fine is computed and collected. If the fine is not paid, a record of the author and title of the book, the name and address of the borrower, and the amount of the fine is made and placed in a designated file.
2. Transaction card is removed from the book pocket and placed in the tray at the return desk, unless the book is on reserve or recall, in which case the book is placed on a

CALL NUMBER		FEB 4 1955
709 R395		
VOL.		
YEAR		
COPY 2		
AUTHOR		
Richardson		
TITLE		
Way of western art		
SIGNATURE		
Helen Henderson		
ADDRESS		
411 Morningside Ave.		
<input type="checkbox"/>	OFFICER OR EMPLOYEE	<input type="checkbox"/> ALUMNUS
<input checked="" type="checkbox"/>	STUDENT IN	<input type="checkbox"/> OTHER
DEPT. OF Fine Arts		
COLUMBIA UNIVERSITY LIBRARIES		

Figure 23. Call card, Double Call Slip Charging System, Columbia method. The call card consists of two parts, only one of which is illustrated. The larger part, which is shown, is 3" x 5" and is folded over the smaller 3" x 3" portion fastened to it by means of carbon paper. The reverse side of this card has space for the report on the book requested. The smaller portion is a carbon copy of the larger down to the first double line. The reverse side of the smaller portion has space for reserve information.

- special shelf with the transaction card still in it.
3. Books are placed on a truck to be taken to the stacks.
4. Transaction cards are arranged by date and then by number. These are canceled by comparing them with the carbon copies of the call slips and clipping them to the transaction cards.
5. Clipped carbon copies and transaction cards are arranged by call number.
6. Charge card is pulled from the file and clipped to the appropriate carbon copy and transaction card.

4. Charge card is stamped with the date the notice was sent and refiled in the charge file.
5. Carbon copy is refiled in the transaction date due file.
6. If the charge card shows a renewal, the carbon copy is marked "Ren" and the new date due is added. Dummy carbon copy, giving call number and date of renewal, is made out and placed in front of the transaction date due file of the date of the renewal. Original carbon copy is placed in the original transaction file sequence.
7. Second and third notices for all uncanceled carbon copies are sent in the same manner.

Reserves

When a book is to be reserved for personal use, the following is the procedure used:

1. When a book is to be reserved, a charge card and the verso of the carbon copy are filled out by the reader.
2. Complete fold-over card is placed in the designated tray.
3. Request is checked against the charge file and the outstanding charge card pulled.
4. Charge card of request is attached to the outstanding charge card in the circulation file and numbered to indicate the sequence of reserves.
5. Carbon copy of the request is filed in the date file under the date the book is to be recalled.
6. When a reserved book with a recall slip is returned, it is discharged in the usual manner. Request card will be attached to the outstanding charge card which will be placed in the book. Book is put on the reserve book shelf and a notice is sent to the reader.
7. New carbon copy to be filled out is clipped to the request card, so that the book will be ready for the borrower to charge out when it is called for.

When a book is recalled for immediate use, the procedure varies only in the following respects:

1. Carbon copy of the request is checked against the charge file. Outstanding charge card is pulled and a notice is sent if the two-week loan period has expired.
2. Carbon copy of the request and the outstanding charge card are stamped with the date of the notice.
3. Outstanding charge card is returned to the circulation file and the carbon copy of the request is filed under the date for the second notice.

Circulation statistics

1. Transaction number count for a given day is entered on the guide card in front of the transaction cards.

2. Carbon copy transaction cards are dated with day's stamp in the upper right-hand corner. At the same time, cards for uncanceled Restricted Use and Reference Use Only books are pulled.
3. Charge cards are dated in the upper right-hand corner with the day's stamp. Charge cards for uncanceled Restricted Use and Reference Use Only transaction cards are pulled from the circulation file. Transaction cards for books borrowed by the faculty or staff are stamped "Faculty" and clipped with colored signals. Transaction and charge cards are filed back in the appropriate file. If a charge is not to a member of the faculty and should have been returned that day, both cards are given to the person in charge of overdues.

Special charges

The following routines for various types of special charges have been worked out by the Columbia University Library.

Loans to faculty and staff members

1. Charging routine consists of placing a predated date due card in the book pocket. The date on which the book is charged out is used. The card is stamped with the transaction number that appears on the charge card.
2. When overdue notices are sent, the charge card will indicate the faculty or staff charges. Carbon copy is then stamped "Faculty" and returned to the date due transaction file. Lists of faculty loans can be compiled from uncanceled carbon copies in the date due transaction file.

Charges to Cataloging Department

1. Carbon copy is not stamped with the transaction number.
2. No date due transaction card is put in the book pocket.
3. Books are delivered to the Cataloging Department.
4. Charge cards are given to a page by the cataloger and returned to the circulation desk. These are stamped with the day's date, counted and recorded on a chart at the return desk; they are then filed in the current file at the return desk.
5. Carbon copies are not returned to the circulation desk after the books are delivered.

Charges to Binding Department

1. Charge card is made out by the circulation assistant and the books are delivered to the Binding Department. No carbon copy or transaction card is used.
2. Charge cards are stamped by the Binding Department and returned to the Circulation Department the next morning.
3. Charge cards are stamped with the day's date, counted, and

recorded on a chart at the return desk; they are then filed in the current circulation files at the return desk.

Charges to departmental libraries

Predated date due card, carrying only date charged, is stamped with the transaction number as appears on the charge card and placed in the book pocket. The number of departmental charges is recorded on a special chart. Carbon copy is returned to the circulation desk and clipped to the duplicate slip which is filed in the outstanding request file.

Books for reading room use only

Predated date due card, carrying only date charged, is stamped with the same transaction number and placed in the book pocket. "To be used in library" slip is put in the book. A special mark, such as a cross, is stamped on the carbon copy.

Stack exit desk charges

1. Complete call slip for book obtained in the stacks is filled out by the borrower. This slip is handed to the assistant stationed at the stack exit desk, who checks it for completeness and accuracy.
2. If the book is a student loan, a predated call slip is stamped with the same transaction number. Transaction card is placed in the book pocket and the book given to the reader.
3. If the book is a faculty loan, a predated date due card carrying only the date charged and the carbon copy of the call slip, stamped with the same transaction number, are placed in the book pocket. The book is given to the reader.
4. If the book is from a non-circulating area, a predated date due card carrying only the date charged and the carbon copy of the call slip are stamped with the same transaction number. "To be used in library" slip is placed in the book. Carbon copy is stamped with the designated mark for restricted books.
5. If the book is for reading room use only, a predated date due card stamped only with the date charged and the carbon copy of the call slip are stamped "Reference use only." "To be used in library" slip is placed in the book and a transaction card is put in the book pocket.

Cubicle and reading room desk charges

A yellow reserve card is filled out by the reader. After the information has been checked, the lower half is placed in the book and the upper half is stamped with the designated mark for restricted use books, clipped with colored slips, and placed in

a proper tray at the desk. Number is entered on statistical record sheet.

Advantages

1. Circulation routines are performed with speed, accuracy, and efficiency. Slipping process has been eliminated. Overdue charges are detected automatically and notices can be sent easily on a regular basis. Books can be returned to the stacks as soon as the transaction card is removed. Confusion and rush at the circulation desk are reduced to a minimum, thus allowing the borrower to be taken care of more quickly. Accurate statistical records can be kept.
2. Savings are effected in records and supplies. Date due slips, book cards, and expensive equipment are not necessary.
3. Change-over from an older system can be made easily, since no new records need to be made nor current ones destroyed.
4. Circulation desk is kept neat and free from the clutter of unslipped books.

Disadvantages

1. Reserve system not efficient, as reserve books can be returned to shelves without being held on the designated shelf.
2. Readers who use the stacks without consulting the card catalog are required to fill out a call slip for each volume. On the other hand, readers who have filled out call slips after consulting the card catalog do not need to sign a book card; thus less time is actually required.
3. Illegibility of call slips written by borrowers is possible.
4. More careful checking of copy and volume numbers is required, since there is no book card.
5. Call cards must be filed manually.
6. Amount of clerical work involved in the routines is large, especially in libraries which circulate large numbers of books.

The two methods used in the Double Call Slip Charging System present a solution to university librarians seeking a way to charge out books without using expensive equipment. The change-over from any older system is simple, as are the few new routines the library assistants and patrons must perform. The amount of clerical work involved in these routines, however, is great and should be thoroughly understood before a library with a large daily circulation installs the system.

Conclusion

To sum up the points of difference and similarity as well as the advantages and disadvantages of the seventeen charging systems described in this book, it is best to divide them according to the type of library in which they have been used. The first ten (Newark, Detroit Self-Charging, Visible Record, Dickman, Gaylord, Photographic, Audio Charge, IBM Circulation Control, IBM Modification, and Wayne County systems) are associated with public libraries, although a few — such as the Gaylord and Photographic systems — are used in college and university libraries as well.

Table V shows the main features of each of these ten charging systems. For the most part, the items in the table have been worded so that the answer “Yes” is an advantage. It is interesting to note that the transaction card methods for charging out books (Photographic, Audio Charge, IBM Circulation Control, IBM Modification, and Wayne County) eliminate slipping of books, hand filing of circulation cards, and numerical registration files, reduce the routines involved in sending overdue notices, and require no reregistration of borrowers for installation. Three of these methods require machines and all of them separate professional and clerical duties clearly.

The primary disadvantage of all transaction card charging systems as compared with those using book cards is the difficulty encountered in placing a reserve for a specific title. The various types of visible files used for reserve procedures have helped considerably, but much depends on the memory of the

desk assistant. Locating a specific charge in the circulation file and taking inventory are two other difficult routines, but they can be done. Neither book use studies from book cards for discarding purposes nor a breakdown of the circulation statistics by classification number, except by sampling, are possible.

Table VI is a comparison of charging systems used primarily in college and university libraries. It can be seen that all of them, with the exception of the Double Record Charging System, utilize a single charge file. Some use call slips or book cards, and only one requires a machine. Date due slips are used in all except one, which has a transaction card as a date card, and filing is done by call number except in the Accession Number Charging System. The loan period can vary from daily to twice a week or monthly.

The ingenuity of librarians and library equipment manufacturers has done much to develop these seventeen charging systems. It would seem that systems have already been devised to fit even the most difficult of local library situations; however, equipment manufacturers continue to experiment with machines and records which have not been adapted previously to circulation procedures. Since some of these experiments seem to have great potentialities for libraries, a brief description of the routines involved is given here even though they have not been tried out in libraries in a practical way.

The Addressograph-Multigraph Corporation of Cleveland, Ohio, has adapted its credit plate, used with charge accounts by department stores, to library circulation procedures. This system, which is now available to libraries, incorporates an identification plate embossed with the borrower's name and address, a serially numbered punched McBee Keysort date due card and an expendable transaction card, which serves as an overdue postal. The color of the date due card and transaction card indicates the period of the loan. Each book card is equipped with an embossed plate giving the author, title, and classification number. When a book is charged out to a patron the book card, with the embossed plate, is removed from the book pocket and placed on the charge imprinter. The borrower's embossed identification plate is placed above the book card. A transaction card of the proper color, bearing the same number and date as the date due card, is placed on the imprinter on top of the other two cards. The handle of the machine is pushed down for the first printing of the borrower's name and address and the author and title of the book being withdrawn. The transaction card is turned over for the second printing and then placed with the other cards of the same color in the circulation desk. A date

TABLE V
Comparison of charging systems
used primarily in public libraries

Charging system	Machines necessary	Transaction card	Book card	Book slipping eliminated	Hand filing eliminated	Reregistration necessary	Numerical registration file eliminated	Charging routines performed by several
Newark	No	No	Yes	No	No	No	No	Yes
Detroit Self-Charging	No	No	Yes	No	No	No	No	Yes
Visible Record	No	No	Yes	No	No	Yes	Yes	Yes
Dickman	Yes	No	Yes	No	No	Yes	No	No ¹
Gaylord	Yes	No	Yes	No	No	Yes	No	No
Photographic	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Audio-Charge	Yes	Yes	No	Yes	Yes	No	Yes	No
IBM Circulation Control	Yes	Yes	No	Yes	Yes	No	Yes	No
IBM Modification	No	Yes	No	Yes	Yes	No	Yes	No
Wayne County	No	Yes	No	Yes	Yes	No	Yes	Yes

¹One person per machine.

TABLE V *Continued*

Charging system	Overdue routines reduced	Location of book in circulation easy	Reserve procedures satisfactory	Professional and clerical duties clearly separated	Circulation statistics breakdown possible	Weeding and inventory routines easy to handle	Public performs part of charging process	Book use studies available
Newark	No	Yes	Yes	No	Yes	Yes	No	Yes
Detroit Self-Charging	No	Yes	Yes	No	Yes	Yes	Yes	Yes
Visible Record	Yes	Yes	Yes	No	Yes	Yes	No	Yes
Dickman	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Gaylord	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Photographic	Yes	No	No	Yes	No	No	No	No
Audio-Charge	Yes	No	No	Yes	No	No	No	No
IBM Circulation Control	Yes	No	No	Yes	Yes ²	No	Yes	Yes
IBM Modification	Yes	No	No	Yes	No	No	Yes	No
Wayne County	Yes	No	No	Yes	No	No	Yes	No

²Spot checks possible.

TABLE VI
Comparison of charging systems
used primarily in college and university libraries

System	Single charge file	Call slip or card	Book card	Machine used	Book slipping eliminated	Hand filing eliminated
Double Record	No	Yes	Yes	No	No	No
<u>Tabs</u>						
Date	Yes	Yes	No	No	Yes	No
Ink	Yes	Yes	No	No	Yes	No
Signal	Yes	No	Yes	No	No	No
Scotch Tape	Yes	No	Yes	No	No	No
<u>Punched Card</u>						
Transaction Card	Yes	Yes	No	Yes	Yes	Yes
Call Card	Yes	Yes	No	IBM-Yes McBee-No	Yes	Yes
Book Card	Yes	No	Yes	No	No	Yes
Tab Pocket	Yes	No	Yes	No	No	No
Accession Number	Yes	Yes	No	No	Yes	No
Colored Card	Yes ¹	Yes	No	No	Yes	No
Double Call Slip	Yes ²	Yes	No	No	Yes	No

¹Single loan file, but with duplicate borrower's file.

²Single loan file, but with transaction card file.

TABLE VI *Continued*

System	Filing by number class	Date slip	Circulation file apt to be cumbersome	Loan period varies	Interval at which loans are due
Double Record	Yes	Yes	Yes	No	Daily
<u>Tabs</u>					
Date	Yes	Yes	No	Yes	Daily Monthly
Ink	Yes	Yes	No	Yes	Daily Twice a week
Signal	Yes	Yes	Yes	Yes	Daily Weekly
Scotch Tape	Yes	Yes	No	No	Twice a week
<u>Punched Card</u>					
Transaction Card	Yes	No ³	No	No	Two weeks
Call Card	Yes	Yes	No	Yes	Daily Twice a week
Book Card	Yes	Yes	Yes	Yes	Daily Twice a week
Tab Pocket	Yes	Yes	Yes	No	Three times a week
Accession Number	No	Yes	No	No	Weekly
Colored Card	Yes	Yes	No	No	Daily
Double Call Slip	Yes	No ³	No	No	Weekly

³Transaction card as date card.

due card of the same color as the transaction card is placed in the book pocket. This completes the charging process. A book is discharged by simply removing the date due card. These date due cards are sorted in the usual manner. The missing numbers are compared with the transaction cards, on which are stamped the name and address of the borrower and the author and title of the book as well as the date due. These provide a completely addressed overdue postal card. Renewals are easily accomplished by stamping "Renewed" on the transaction card and filing it in front of the tray of cards for the new due date. Reserves are handled in the same way as for photographic charging.

At first glance, it would seem that the main advantage of the charge plate system is that it uses a double transaction card which automatically becomes an overdue postal card. This would eliminate many procedures connected with overdue routines. However, the necessity for equipping the book card for every circulating book in the library with an embossed plate would prove costly and time consuming both during the period of installation and later when new books are added. On the other hand, the book card becomes a permanent one and a record of every book in circulation is available. The borrower also has a permanent card since registration renewals can be made by means of an adhesive-backed signature card readily attachable to the plate.

It would seem that this charging system has great potentialities for cooperation between public libraries and department stores in a city and between college or school libraries and other departments in the same institution. One identification plate could be carried by a reader and used in the library and in a store for charge accounts; or by a student in a school or college for registration, identification, and for withdrawing books from the library.

The Telecomputing Corporation of Burbank, California, has made available equipment for a system which uses punched tape for recording book charges. The borrower's card and the book card are pre-punched with holes which identify the reader and the book by means of a machine called the tag reader. When a book is charged out, the book card and borrower's identification card are entered in the tag reader, which automatically produces a punched tape. With the use of a tape-to-card converter, the information on the punched tape is transferred to punched cards. This tabulating equipment can be purchased or the tapes can be mailed to service bureaus, which can report periodically by mail the names of missing books. When a book is returned to the library the book card is entered in the tag reader which auto-

matically credits the borrower with its return.

Further developments in charging procedures reveal attempts to simplify routines and records. Hoyt R. Galvin, Director of the Charlotte and Mecklenburg County Library in North Carolina, has devised a self-charging system which uses no machines except for the overdue routines. It incorporates a charge slip which is divided into two sections: on the left-hand side is space for the accession numbers of the books being withdrawn (filled in by the library patron); the right-hand side has space for the transaction card number used in each book circulated (filled out by the desk assistant). The borrower signs his name and address on each slip. These charge slips are filed in numerical sequence by the transaction number, and prenumbered date due cards are placed in each book circulated. The charge slips will be photographed for overdues by a Photoclerk or Verifax or by xerography. With this system Mr. Galvin expects to use a Remington Rand Chainindex on which will be placed the registration slips for each borrower. On the bottom of these slips will be the figures '55, '56, '57, '58, etc., which will be checked each year as a book is withdrawn by the borrower whose signature is on the slip. This will indicate whether or not the registered borrower has used the library during the year; if he has not done so for several years, it will be assumed that he is no longer a registered borrower and his slip will be removed from the file.

A further simplification of records has been devised by L. R. McColvin and his staff at the Westminster Public Library in London, England. Each patron is given a reader's card and three tokens, which are valid for one year. The borrower, who uses his reader's card at the time of withdrawing a book, gives a token to the desk assistant. When he returns a book, he receives one token. The date due is stamped on the date slip in the book. No overdue notices can be sent, because there is no record of what books are out in circulation nor of who has what book. At the end of the year, in order to renew his reader's card, the borrower must produce his three tokens or pay a fine of ten shillings for each token he does not have. If the patron loses a token, he may be required to pay the same fine before he can obtain another; and no borrower can "lose" and pay for more than three tokens in a year.

It would seem that this method for charging out books reduces circulation procedures to the simplest possible point. Only by using this system and the others described above will it be possible to learn whether or not they are of practical value for libraries. Certainly they have great potentialities and are worthy of study by librarians.

With the introduction of machines into circulation procedures and the use of punched or specially printed cards to facilitate charging methods libraries have made great advances in the past twenty years, not only in putting some of their important routines on a more businesslike basis but also in reducing the cost and time necessary for carrying out these procedures. Although no extended studies of the cost of installation and savings in staff time are available, it is felt among librarians that the newer methods for charging out books are a vast improvement over the older ones and that they have effected enormous savings for libraries. These new charging systems have opened up many possibilities, and offer techniques and routines which are adaptable to the present-day philosophy of librarianship which endeavors to bring readers and books together and allows the librarian to devote himself to carrying out this purpose.

Some libraries using each charging system*

The following is a partial list of libraries using each of the charging systems described in this book except the Newark, Detroit Self-Charging, and Double Record Charging Systems. In order to make the list as representative and as practical as possible, all types and sizes of libraries in various parts of the country have been included. A more complete listing usually can be obtained from the manufacturers of the equipment.

Accession Number Charging System

Lamont Library, Harvard University, Cambridge,
Massachusetts

Audio Charge System

Cedar Rapids Public Library, Cedar Rapids, Iowa^{1†}
Charlotte and Mecklenberg County Public Library,
Charlotte, North Carolina¹
Des Moines Public Library, Des Moines, Iowa¹
Gary Public Library (Bookmobile), Gary, Indiana¹
St. Louis County Public Library (Bookmobiles),
St. Louis, Missouri²
Summit Free Public Library, Summit, New Jersey¹

Colored Card Charging System

Bowdoin College Library, Brunswick, Maine

*Material for this list was obtained from the companies manufacturing the equipment and was checked with each library.

^{1†}Notes will be found at the end of the Appendix.

Dickman Book Charger System

Jersey City Public Library, Jersey City, New Jersey
 Newark Public Library, Newark, New Jersey
 Orange Public Library, Orange, New Jersey

Double Call Slip Charging System: Columbia Method

Columbia University Library, New York, New York
 Duke University Library, Durham, North Carolina

Double Call Slip Charging System: Missouri Method

St. Louis University Library, St. Louis, Missouri
 University of Missouri Library, Columbia, Missouri

Gaylord Charging System

Boise Public Library, Boise, Idaho
 Drake University Library, Des Moines, Iowa
 Florence Lauderdale Public Library, Florence, Alabama
 Illinois Institute of Technology Library, Chicago, Illinois
 Madison Public Library, Madison, Wisconsin
 Malden Public Library, Malden, Massachusetts
 Meriden Public Library, Meriden, Connecticut
 Middletown Public Library (Russell Library), Middletown,
 Connecticut
 San Jose Public Library, San Jose, California
 Santa Barbara Public Library, Santa Barbara, California
 Santa Fe Public Library, Santa Fe, New Mexico
 Sheffield Public Library, Sheffield, Alabama
 Tacoma Public Library, Tacoma, Washington
 University of Alabama Library, University, Alabama
 Western Michigan College Library, Kalamazoo, Michigan³
 Wichita Public Library, Wichita, Kansas
 Wilmette Public Library, Wilmette, Illinois
 Worthington Public Library (James Kilbourn Memorial
 Library), Worthington, Ohio

IBM Circulation Control¹³

Detroit Public Library, Detroit, Michigan
 Stockton and San Joaquin County Free Library, Stockton,
 California

IBM Modification

Mill Valley Public Library, Mill Valley, California

Photographic Charging Systems: Diebold

Brookline Public Library, Brookline, Massachusetts
 Enoch Pratt Free Library (Branches), Baltimore, Maryland
 Philadelphia Public Library (Branches), Philadelphia,
 Pennsylvania

Photographic Charging Systems: Recordak

Birmingham Public Library, Birmingham, Alabama⁴
 Boston Public Library, Boston, Massachusetts⁴
 Chicago Public Library, Chicago, Illinois⁴
 Cincinnati Public Library, Cincinnati, Ohio⁴
 Cleveland Public Library, Cleveland, Ohio⁴
 Dallas Public Library (Children's Dept., and Branches),
 Dallas, Texas
 East Orange Public Library, East Orange, New Jersey⁴
 Glendale Public Library, Glendale, California^{4,9}
 Long Beach Public Library, Long Beach, California⁶
 Los Angeles Public Library, Los Angeles, California^{7,8}
 Minneapolis Public Library, Minneapolis, Minnesota⁵
 Queens Borough Public Library, Jamaica, New York⁴
 New York Public Library, New York, New York⁵
 Sacramento Public Library, Sacramento, California^{5,9}
 St. Paul Public Library, St. Paul, Minnesota⁵
 San Bernardino Free Public Library, San Bernardino,
 California⁹
 Tulsa Public Library, Tulsa, Oklahoma⁵

Photographic Charging Systems: Remington Rand

Brooklyn Public Library, Brooklyn, New York⁵
 College of Steubenville, Steubenville, Ohio¹⁰
 Dallas Public Library, Dallas, Texas^{5,10}
 Denver Public Library, Denver, Colorado⁵
 Enoch Pratt Free Library, Baltimore, Maryland⁵
 Erie County Public Library (Bookmobiles), Buffalo, New York⁴
 Evansville Public Library, Evansville, Indiana⁵
 Fort Wayne Public Library, Fort Wayne, Indiana⁵
 Gary Public Library, Gary, Indiana⁴
 Hartford Public Library, Hartford, Connecticut⁴
 Kansas City Public Library, Kansas City, Missouri⁴
 Los Angeles City College Library, Los Angeles, California⁴
 Louisville Public Library, Louisville, Kentucky¹²
 Pasadena Public Library, Pasadena, California⁹
 Schenectady County Public Library (Bookmobile),
 Schenectady, New York¹⁰

Punched Card Charging Systems: IBM Call Cards

University of California Library, Berkeley, California
 University of Florida Library, Gainesville, Florida
 University of Texas Library, Austin, Texas
 University of Wisconsin Library, Madison, Wisconsin

Punched Card Charging Systems: McBee Keysort Book Cards

Butler University Library, Indianapolis, Indiana

University of Illinois, Undergraduate Division Library,
Chicago, Illinois
University of New Hampshire Library, Durham, New
Hampshire

Punched Card Charging Systems: McBee Keysort Call Cards

Brown University Library, Providence, Rhode Island
Cornell University Library, Ithaca, New York
Ohio Wesleyan University Library, Delaware, Ohio
Pennsylvania State College Library, State College,
Pennsylvania
Purdue University Library, Lafayette, Indiana
Simmons College Library, Boston, Massachusetts
University of Arkansas Library, Fayetteville, Arkansas
University of Georgia Library, Athens, Georgia
University of Illinois Library, Urbana, Illinois
University of New Mexico Library, Albuquerque,
New Mexico¹¹
University of North Carolina Library, Chapel Hill,
North Carolina
University of Oklahoma Library, Norman, Oklahoma
University of Tennessee Library, Knoxville, Tennessee
University of Tulsa Library, Tulsa, Oklahoma
University of Virginia Library, Charlottesville, Virginia

Tab Charging Systems: Date Tabs

De Pauw University Library, Greencastle, Indiana
Joint University Libraries, Nashville, Tennessee
Lynchburg College Library, Lynchburg, Virginia
Woman's College of the University of North Carolina
Library, Greensboro, North Carolina

Tab Charging Systems: Inked Tabs

University of Pennsylvania Library, Philadelphia,
Pennsylvania

Tab Charging Systems: Scotch Tape Tabs

Iowa State College Library, Ames, Iowa
University of Michigan Library, Ann Arbor, Michigan
University of Washington Library, Seattle, Washington

Tab Charging Systems: Signal Tabs

Bethany College Library, Bethany, West Virginia
Northwestern University Library, Evanston, Illinois
Trinity College Library, Washington, D. C.
University of Minnesota Library, Minneapolis, Minnesota
Vanderbilt University Library, Nashville, Tennessee

Visible Record Charging System: Demco

Batavia Public Library (Richmond Memorial Public Library),
Batavia, New York

Chicago Heights Public Library, Chicago Heights, Illinois
 Greensburg Library, Greensburg, Pennsylvania
 Jennings Public Library, Jennings, Louisiana
 LaCrosse Public Library (Branch), LaCrosse, Wisconsin
 Ludlow Public Library (Hubbard Memorial Library),
 Ludlow, Massachusetts
 Mount Vernon Public Library, Mount Vernon, Ohio
 Napoleon Public Library, Napoleon, Ohio
 Rolla Public Library, Rolla, Missouri
 Swanton Public Library, Swanton, Ohio
 Winona Free Public Library, Winona, Minnesota

Visible Record Charging System: Remington Rand

Jefferson City Public Library, Jefferson City, Missouri

Wayne County Charging System

Boston Public Library (Branches), Boston, Massachusetts⁴
 Door County Library (Bookmobiles), Sturgeon Bay,
 Wisconsin
 Flint Public Library (Branches and Central Children's
 Department), Flint, Michigan
 Hartford Public Library (Branches), Hartford, Connecticut
 Jackson Public Library, Jackson, Michigan
 Prince George's County Memorial Library, Hyattsville,
 Maryland
 Saratoga Springs Public Library, Saratoga Springs,
 New York
 Topeka Public Library, Topeka, Kansas
 Wayne County Public Library, Detroit, Michigan⁴

Notes to accompany Appendix A

- ¹ Gray Audograph machine used.
- ² Soundsciber machine used.
- ³ Combined with Scotch Tape Tabbing System.
- ⁴ With McBee Keysort transaction cards.
- ⁵ With 3" x 5" serially numbered cards.
- ⁶ With Remington Rand transaction cards.
- ⁷ With IBM transaction cards.
- ⁸ Called "Photo-Lending."
- ⁹ With Hadley Unisort transaction cards.
- ¹⁰ Book pocket photographed instead of book card.
- ¹¹ With Hadley Unisort call card.
- ¹² With 3" x 6 1/4" serially numbered card.
- ¹³ The Montclair, New Jersey, Public Library uses an IBM punched card charging system, but not the one described in this book. See Chapter 9.

Partial list of companies selling circulation equipment and supplies

The Bates Manufacturing Co.
Orange, N.J.

Bates Numbering Machine

Black Star Products Co.
262 Santa Rita Ave.
Palo Alto, Calif.

Flag-It stickers

Bro-Dart Industries
Library Efficiency Corp.
65 E. Alpine St.
Newark 5, N.J.

Card supplies; Dickman
Book Charger

Demco Library Supplies
Madison 3, Wis., and
New Haven, Conn.

Card supplies; visible
record system

Diebold Inc.
Flofilm Division
P. O. Box 127
Norwalk, Conn.
(Branches in large cities)

Diebold machines for
photographic charging

Ferguson Printing Co.
Durham, N.C.

Supplies for Double Call Card
Charging System (Columbia
System)

Gaylord Brothers
155 Gifford St.
Syracuse, N. Y., and
Stockton, Calif.

Card supplies; Gaylord
Electric Charger

General Business Forms Corp. 522 5th Ave. New York, N.Y.	Supplies for Double Call Card Charging System (Columbia Method)
Graffco Vise Signals George B. Graff Co. 54 Wasburn Ave. Cambridge, Mass.	Signal tabs
Gray Manufacturing Co. Arbor St. and Capitol Ave. Hartford 1, Conn. (Branches in large cities)	Gray Audograph for Audio Charge System
Charles R. Hadley Co. 330 North Los Angeles St. Los Angeles, Calif.	Unisort cards
International Business Machines, Inc. 590 Madison Ave. New York 22, N.Y. (Branches in large cities)	Punched cards; equipment for IBM Circulation Control System
McBee Co. Athens, Ohio (Branches in large cities)	Punched cards; sorting machines, including needle; punching machines; pull card files
Perfect Marker P. O. Box 6541 Washington, D.C.	Plastic Tabs
Recordak Corp. 350 Madison Ave. New York 17, N. Y. (Branches in large cities)	Recordak Microfilmer for photographic charging
Remington Rand, Inc. Library Bureau Division 315 Fourth Ave. New York 10, N. Y. (Branches in large cities)	Card supplies; Remington Rand Photocharger; visible record system; visible files; date tab cards; Photoclerk
Smith Metal Signal Clip Essex, Nebraska	Signal tabs
Soundscriber Corp. 146 Munson Ave. New Haven, Conn. (Branches in large cities)	Soundscriber for Audio Charge System

Sturgis Printing Co.
Sturgis, Mich.

Supplies for Wayne County
Charge System

Wheeldex Manufacturing Co.
40 Bank St.
White Plains, N. Y.

Visible files

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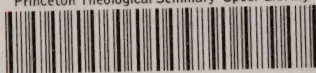
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